

The HumSAT mission main objective is to provide humanitarian aid and disaster or climate change monitoring networks with a communication infrastructure that offers a global connection. The HumSAT mission has also an educational focus; aiming at training university students in space engineering and project management.

In addition the project offers the possibility to include secondary payloads in the HumSAT spacecraft.

Data is obtained from sensors placed anywhere in the world, and it is transported to its final users, i.e. the sensors owners. The sensor type makes no difference to the system, as it is designed to act as a data transport mechanism. The only requirement for the sensors to be able to use the HumSAT system is to be compliant with the HumSAT interface for sensors.

The transport process consists of uploading sensor data to a spacecraft of the constellation, and then downloading it through the GENSO network. Data are then processed so that users can retrieve it through a standard interface based on the Internet.

To perform the mission objectives, the following preliminary system architecture is developed. The expected product architecture is composed of three main segments and the corresponding interfaces between them: