

ESEIAAT

ASTREA. Systems of the ground Segment

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1 Global Description of the system

The Groud Segment is composed of three Ground Stations, together with a mission control center (MCC) which will be used for the headquarters of the company and for managing all the ground stations.

Each ground station is composed of two clearly differentiated parts:

- Spacecraft (S/C) control
- Payload (P/L) control

Since the **S/C control** part is crucial, it is going to be treated independently. Hence, two systems are to be designed.

1.1 Mission Control Center

1.2 Ground Station

1.2.1 SpaceCraft Control

The S/C control system will be in charge of receiving and transmitting the TT&C (telemetry and telecommand) data.

Since this part does not require a big amount of bits, we are going to stick to a UHF Antenna and treansciever.

1.2.2 Payload Control

1.2.3 Global Diagram of the system