

ExoMars. EDM SCOE GNC



SENER XSPACE / XIN ORBIT OPERATIONS / SPAIN

*EXOMARS. EDM SCOE
GNC*

Fecha inicio: julio del 2013

País: Spain

Fecha fin: julio del 2016

This function of this equipment is to conduct GNC (Guidance, Navigation and Control) system testing of the Entry, Descent and Landing Demonstrator Module (EDM) in the ExoMars project. For this purpose, it provides interfaces both for the simulation and stimulation of the sensors and actuators incorporated in the AOCS. The SCOE has a complex real-time function and a fault injection function.

It also has a CAN bus, enabling remote or local communication.

The GNC SCOE provides a Front-end Electronics (FEE) system to interface the hardware of the demonstrator module, as well as other equipment used to stimulate hardware in the loop-control systems. The GNC SCOE carries out real-time simulation (RTS) that has an environment model and dynamics and integrates the GNC unit models.

The RTS provides simulation capabilities for gyroscopes and solar sensors, pulse acquisition from the on-board computer, and the information on stimuli necessary for the radar interface unit.