Oli
ORBITAL LINK INTERFACE

Description

OLI is an auto-aiming robotic system based exclusively on cartographic parameters compatible with all Geostationary Satellites, Frequencies, Dishes, polarizations and platforms.
It´s independence with any current installed infrastructure allows migrating from a fixed satellite network to a flexible operation.

Features

Plug and play installation

Just replace the current fixed canister with OLI´s robotic unit, power up the robot and aim to the selected satellite with the Smartphone App.

Automated realignment

Either for constant fine tuning on any of its 3 axes (azimuth, elevation or polarization) or to turn traffic to another satellite, the Smartphone App or the centralized server are the only tools needed.

Cartographic parameters acquisition

OLI´s robotic unit takes 7 minutes to acquire the necessary cartographic parameters before it can aim to the selected satellite. This is accomplished using a magnetic compass included in the electronic architecture of the robot and mathematical algorithms which combined provide a 0.4°accuracy.

Remote and local control

Once the VSAT is online, OLI´s Robotic Unit connects to a centralized server for remote hands control.

Technological agnosticism

OLI´s robotic unit relies solely on cartographic parameter for aiming making it a one of its kind auto-pointing system.

Mechanical backlash

The mechanics on the robot has been designed to guarantee the necessary accuracy for its purpose with a 0.2° backlash in all axes.

Polarization

OLI works with linear and circular polarization by rotating the dish disregarding its eccentricity.

Benefits

Spectral efficiency

Achieve more efficient MODCODs by remotely control aiming and polarization saving up to 20% of the space segment.

Easy to use

Anyone becomes an expert VSAT technician with the use of the intuitive Smartphone App.

Flexibility

Turn traffic to any Geostationary Satellite with one click form anywhere in the world.

Compatibility

OLI is independent of the frequency, polarization, ground technology and dish eccentricity making it the perfect choice to transform a fixed satellite network into a robotized one.

With 27 years of experience in the telecommunications market, Servicio Satelital has developed entirely in Argentina, through the work of more than 3 years of its R&D team, OLI (Orbital Link Interface); a self-pointing agnostic robotic system that will revolutionize satellite connectivity in key sectors such as mining, energy and telecommunications, capable of targeting any geostationary satellite.
Based exclusively on cartographic parameters, OLI has been designed to be cost effective but accurate and suitable for the harsh environment. In terms of the mechanics he has built with three identical gearboxes and stepper motors. The system can operate a 1.2 m diameter reflector up to 80 km/h wind and extreme weather conditions.

OLI's decision-making algorithms are based on the readings of a magnetometer accurately to ensure an accuracy of 0.4 degrees.
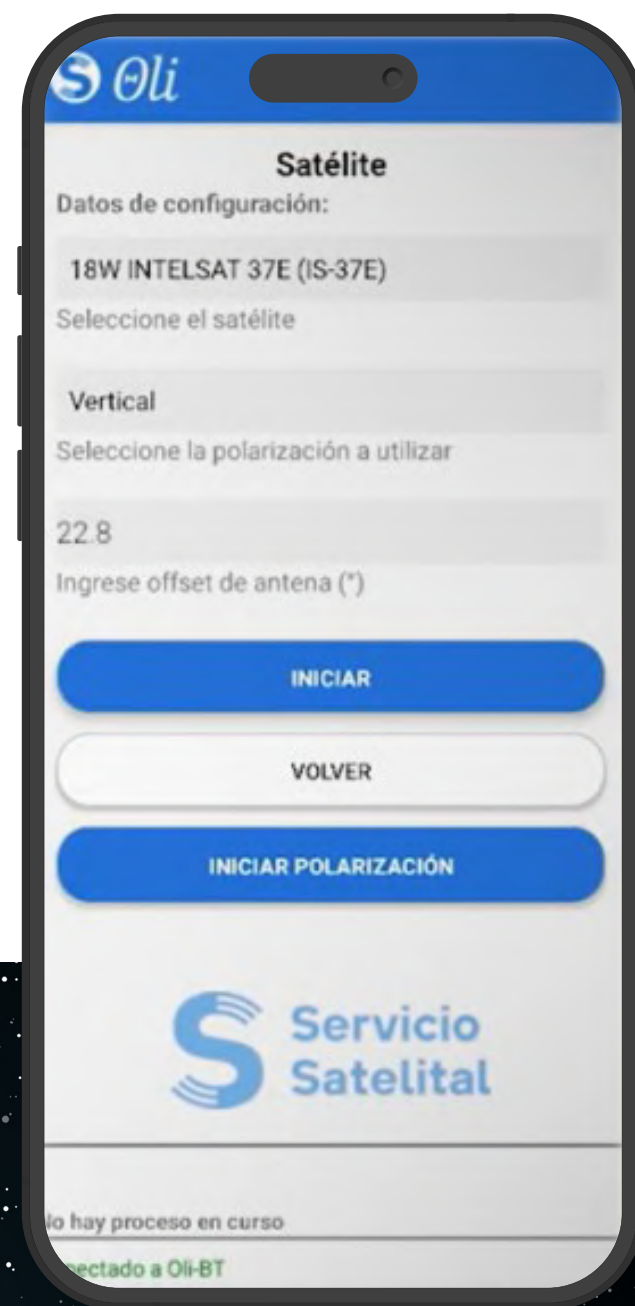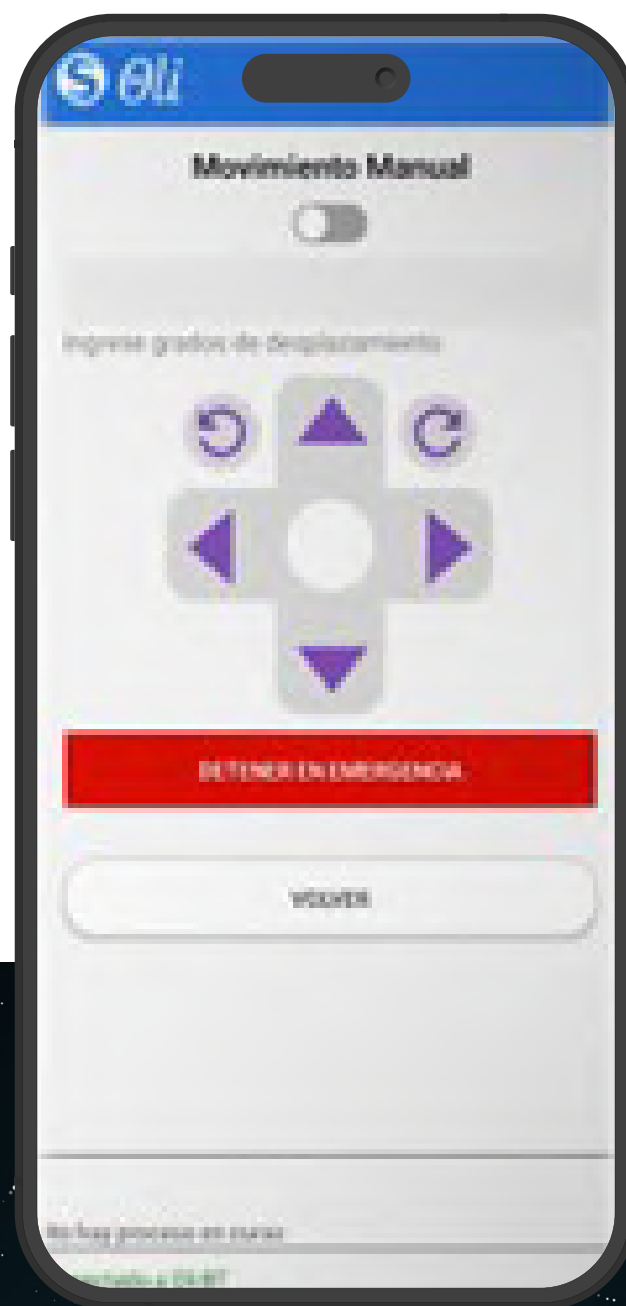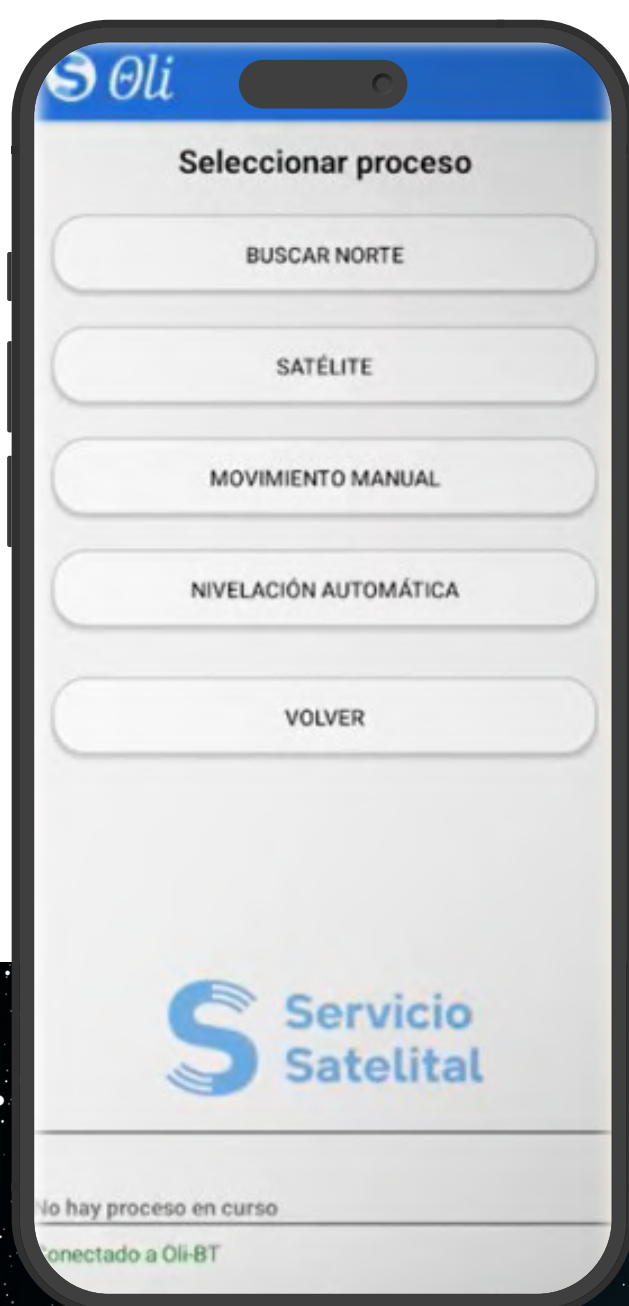
Technical specification

Electrical parameters

Power input	24 VDC
Power/Signal interface	HDC 04A KOLU 1PG11G HDC 04A TOLU 1PG11G
Interfaces	TCP/IP WiFi/Bluetooth/RS422
Sensors	Magnetometer, accelerometer, gyroscope and GPS

Mechanical parameters

Axes	Azimuth, Elevation, Polarization
Flange	76 mm / 3 inches
Azimuth coverage	0° to 359° (single turn)
Elevation coverage	-9° to +90°
Polarization coverage	-90° to 90°
Elevation speed	3° to 6°/sec
Azimuth speed	3° to 6°/sec
Polarization speed	3° to 6°/sec
Aiming accuracy	0.4°
Mass	34 kg

Environmental parameters

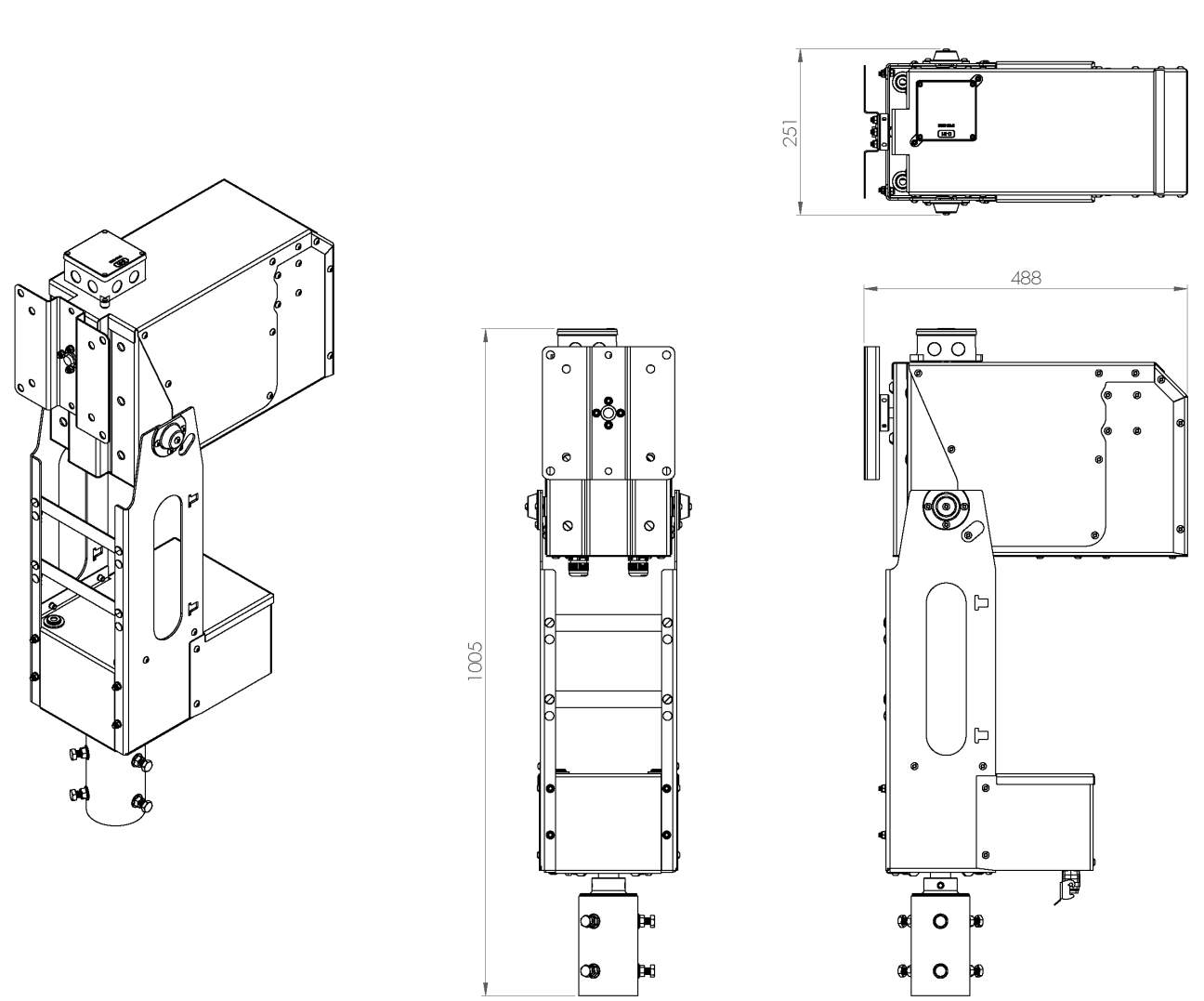|	
Operating temperature	-10 to +50 °C
IP rating	IP65
Wind loading	≤ 80 km/h operational (assuming 1.2 m diameter reflector)

Optional features

AC/DC power input converter

Mechanical parameters

Smartphone application version 4.1	• Dish offset input • Linear/Circular polarization input • Leveling • Geographic north acquirements commands • Auto aiming towards geostationary satellites • Manual movements • Polarization adjustments • List of all geostationary satellites • Bluetooth/Wifi connection with robotic unit
Robot firmware	Oli Proprietary Version 3.1
Communications board	Oli Proprietary Version 3.1 RS422 interface
Centralized server	• Dish Offset input • Linear/Circular polarization input • Auto aiming towards geostationary satellites • Manual movements • Polarization adjustments • List of all geostationary satellites • Magnetic declination update parameters • Hardware status • Commands log • Antenna fleet geolocation • TCP/IP connection

Dimensions

Operative, leveled	
Closed for transportation	

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