



# Data sheet - TRACK

The Terma TRACK product provides accurate, real-time graphical visualisation and analysis of spacecraft or a fleet in orbit around the Earth and ground stations. It can show spacecraft orbits from TLE files as well as real-time sources (satellite control system or simulator). It can perform event determination such as station AOS/LOS or eclipses.

## INTERACTIVE 3D ENVIRONMENT

**3D Globe:** Interactive 3D Globe.

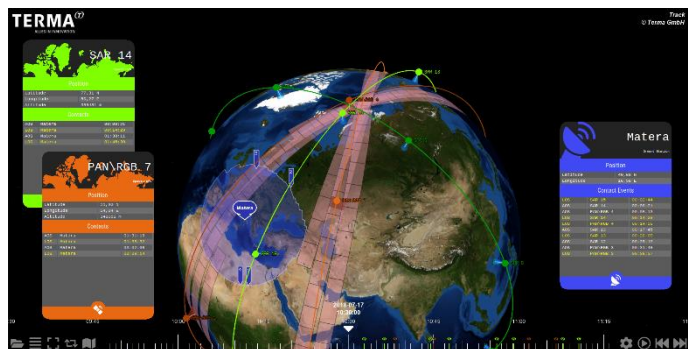
**Flat Map:** Interactive Flat Map.

**Digital Elevation Model support:** Support for DEM files representing the terrain of the body in both views.

**Solar System:** Solar system overview for interplanetary missions.

**Solar System Bodies:** Every major body of the solar system possible to navigate via globe or flat map.

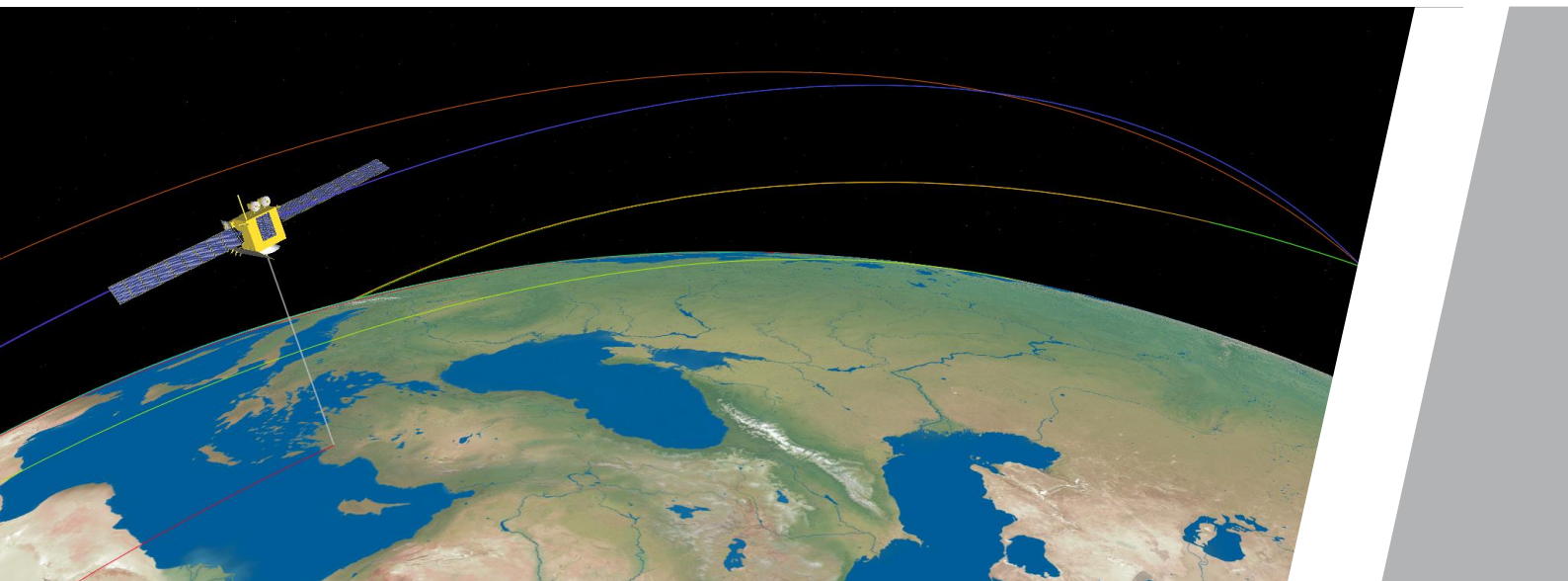
**Multiple Map Projection:** Support for most major map projections.



## SPACECRAFT VISUALIZATION

**Attitude:** Realistic representation of spacecraft attitude.

**Solar-Panels:** Realistic representation of solar panel orientation.



# TRACK

**Instrument FoV:** Field of View cones oriented with the spacecraft's instruments (i.e. Antennas, Sensors, etc.).

**Swath Path:** Swath path for instruments looking down from the orbiting body.

**Animated Deployable:** Support for 3D models with animations to show deployment in real time.

**Constellation Support:** Support for spacecraft constellation visualization.

**S/C Relay Visualisation:** Graphical representation of spacecraft communication and relays.

## ORBIT VISUALIZATION AND PROPAGATION

**Orbit and Ground Track:** Track orbit and ground track of spacecraft.

**Relay and Communication:** Visual representation of communication between ground and spacecraft.

**Eclipse Determination:** Determination of eclipse conditions in orbit.

**Manoeuvres:** Plan manoeuvres and burns.

**Recording:** Orbit recording from live data sources.

**Manipulation:** Orbit manipulation with real time feedback.

## GROUND ASSETS ACQUISITION/LOSS OF SIGNAL DETERMINATION

Ground asset location and elevation masks (e.g. Ground Station).

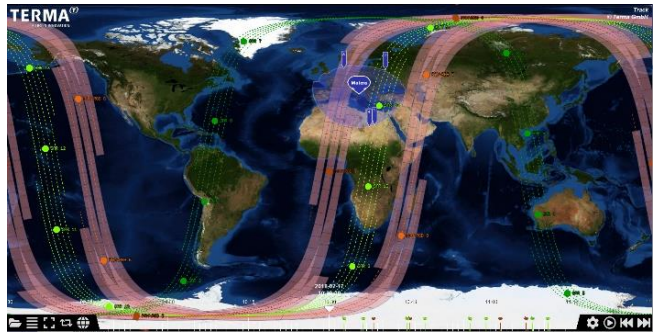
Determination of future AOS and LOS events.

## PRODUCT VISUALISATION

Support for scientific product data visualization in a geographic 3D space.

## REALTIME MONITORING AND CONTROL

If connected to a satellite control system, shows real-time telemetry data and alarms for a satellite or a constellation and provides commanding capability.



## ORBIT FILE FORMATS

**TLE:** Two-line element sets.

**CCSDS OEM:** Orbital Ephemeris Message.

**STK:** Satellite Tool Kit.

**SP3:** National Geodetic Survey.

**SPK:** SPICE Ephemeris Format.

## SUPPORTED DATA SOURCES

**CCS5:** Terma Spacecraft Control System.

**TEMU:** Terma Emulator.

**ORBIT:** Terma Flight Dynamics suite.

**SIMSAT:** ESA Simulator infrastructure.

**SCOS-2000:** ESA Mission Control System.

## SPECIAL FEATURES

**3D Model Support:** Supports 3D models from several standards: COLLADA, 3DS, OBJ, etc.

## OPERATING SYSTEMS

**Windows®:** works on all recent versions.

**Linux®:** works on all recent distributions.

**MacOS®:** works on all recent distributions.

## SOFTWARE PLATFORM

Java, based on NASA WorldWind and Orekit frameworks. IPR owned by Terma, no export restrictions.

## SUPPORT

Standard license price includes 1 year warranty & email support. Standard training packages available on request. More information from <http://tgss.terma.com/> WIKI and access to bug-tracking system available to licensed customers.