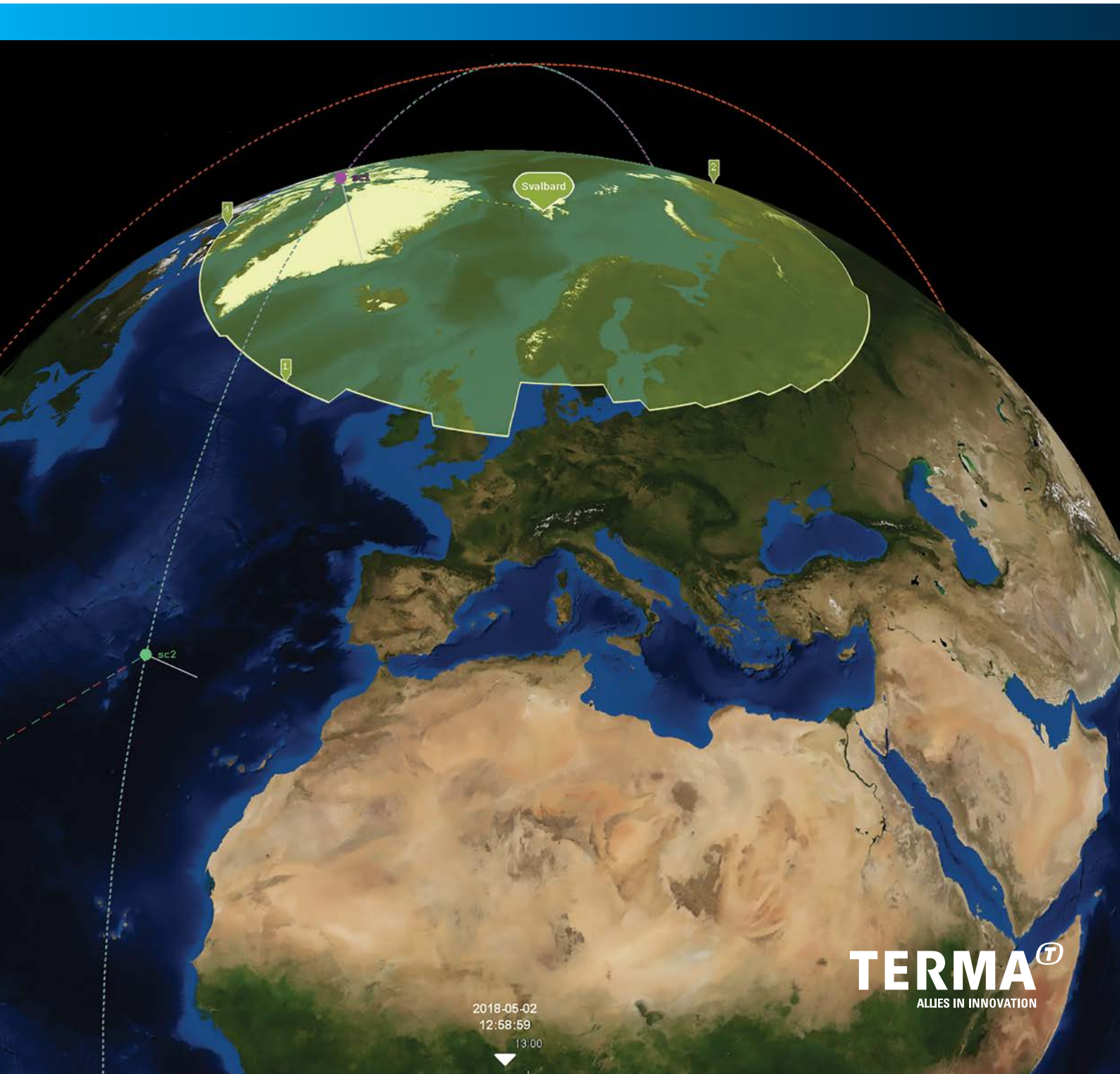
# TERMA GROUND SEGMENT SUITE

## SATELLITE OPERATIONS, TESTING & SIMULATION



CCS5
UNIS
PREP
TRACK
ORBIT
PLAN
STAT
TEMU
TSC
CCS5
STAMP

*BepiColombo*

# Terma Ground Segment Suite

The Terma Ground Segment Suite (TGSS) is a comprehensive set of tools that form a complete satellite control system, from satellite testing to operations. This allows the same tool set to be used throughout the entire spacecraft lifecycle.

TGSS is built on more than 30 years of satellite operations and testing experience and reflect many years of lessons learned.
The tools are built with industry and de-facto standards and are compatible with other systems.

Through easy-to-use automation, intuitive user interfaces and customer centric features, TGSS provides a modern performance platform to ensure that customers are able to reduce the cost of their operations and testing activities without compromising quality.

## CCS5 for Satellite Operations

- Spacecraft control system
- Advanced monitoring and control functions
- Scalable from cubesats to constellations
- Automated operations

## uNIS

- Ground station interfaces
- CCSDS SLE
- Provides inter-operability

## ORBIT

- Orbit determination
- Orbit propagation
- Manoeuvre planning
- Command generation

## TRACK

- Orbit trajectory visualization
- Real-time 3D animation
- Display includes spacecraft attitude, payload field of view (FOV), swath path
- Station visibility (AOS and LOS)
- Touch-screen interaction


## PLAN

- Mission planning
- Automation and manual planning
- Rules and constraints
- Conflict checking and resolution
- Timeline generation
- Onboard schedules

## STAT

- Full mission performance analysis
- Trend analysis, anomalies, and fault detection
- Numerous data export formats

## TEMU

- Flight processor emulator
- Supports ERC32, LEON2, LEON3, LEON4, ARM PowerPC (PPC750 and E500(P2020))
- Bundled device and bus models
- Flight software debugging
- Fast, accurate timing
- Full system simulation framework

## TSC

- Single user spacecraft test system
- Lightweight and easy to use
- Quick installation and setup
- Automated test execution
- Engineer-friendly test language

## CCS5 for Satellite Testing

- Spacecraft test system
- AIT from instruments through to complete spacecraft
- Automated test execution
- Flexible and scalable deployments
- Compliant with industry standards
- High performance

## STAMP

- Data acquisition, presentation, and control for thermal test campaigns
- Advanced data presentation features
- User-friendly and intuitive user interface
- Supports a wide variety of heaters and data-acquisition devices

**Please find more information here: terma.com/markets/space/**
**Product Support Site: tgss.terma.com**

Operating in the aerospace, defense, and security sector, Terma supports customers and partners all over the world. With more than 1,600 committed employees globally, we develop and manufacture mission-critical products and solutions that meet rigorous customer requirements.

At Terma, we believe in the premise that creating customer value is not just about strong engineering and manufacturing skills. It is also about being able to apply these skills in the context of our customers' specific needs. Only through close collaboration and dialog can we deliver a level of partnership and integration unmatched in the industry.

Our business activities, products, and systems include: command and control systems; radar systems; self-protection systems for ships and aircraft; space technology; and advanced aerostructures for the aircraft industry.

Terma has decades of hands-on know-how in supporting and maintaining mission-critical systems in some of the world's most hostile areas. Terma Support & Services offers through-life support of all our products to maximize operational availability, enhance platform lifetime, and ensure the best possible cost of ownership.

Headquartered in Aarhus, Denmark, Terma has subsidiaries and operations across Europe, in the Middle East, in Asia Pacific as well as a wholly-owned U.S. subsidiary, Terma North America Inc., headquartered in Washington D.C. and with offices in Georgia and Texas.



www.terma.com

TERMA
ALLIES IN INNOVATION