Operating in the aerospace, defense, and security sector, Terma supports customers and partners all over the world. With more than 1,400 committed employees globally, we develop and manufacture mission-critical products and solutions that meet exacting 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 Global 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 in the Netherlands, Germany, Belgium, UK, India, UAE, Singapore as well as a wholly-owned U.S. subsidiary, Terma North America Inc. Terma North America Inc. is headquartered in Arlington, in the Washington D.C. area, with other offices in Georgia, Texas, and Virginia.

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Terma in Space

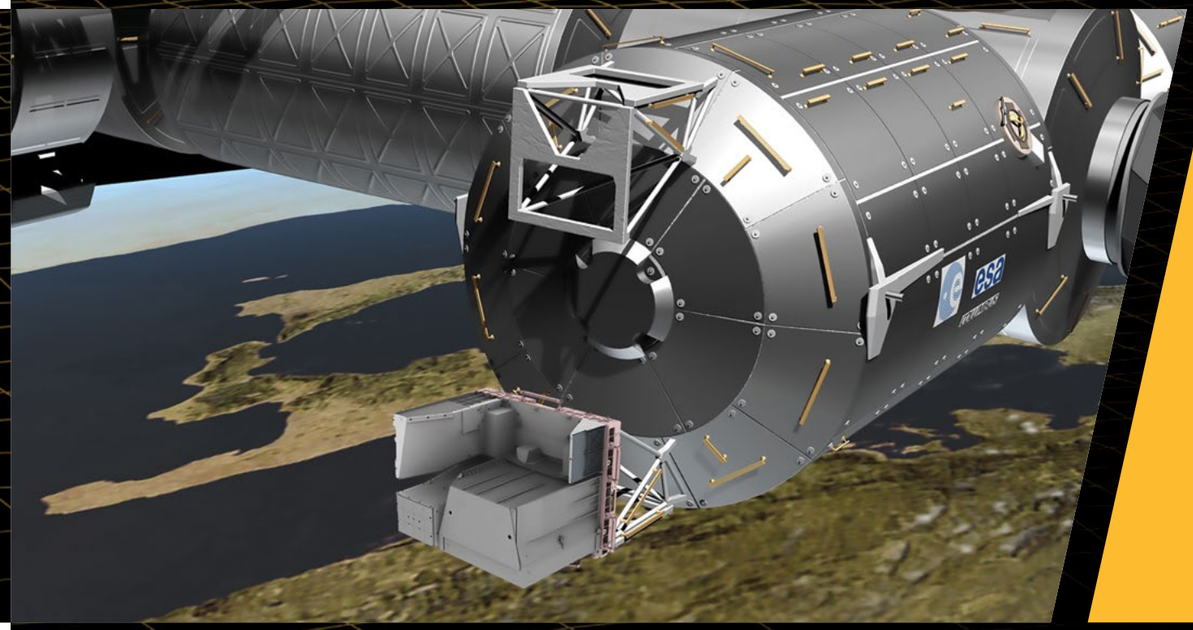

Image courtesy: Eurorpean Space Agency

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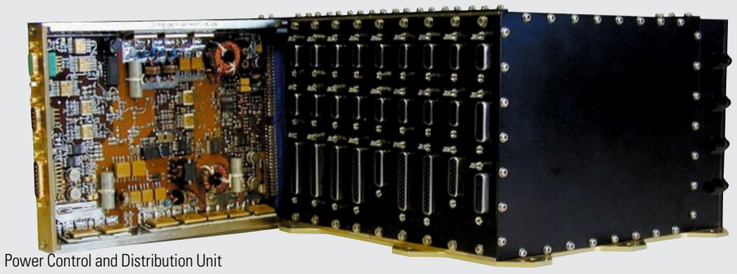
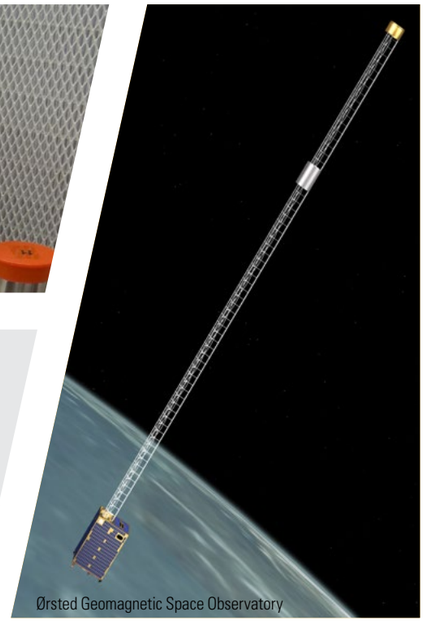
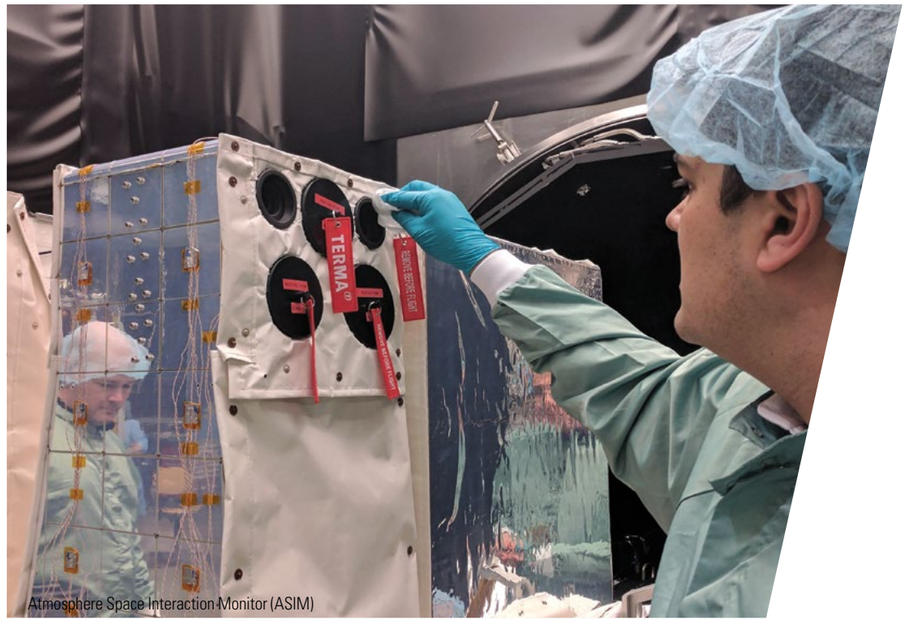
Terma T2 Star Tracker


Power Control and Distribution Unit


Ørsted Geomagnetic Space Observatory



Atmosphere Space Interaction Monitor (ASIM)

Terma in space

From the early days of space exploration, Terma has provided mission-customized software and hardware as well as services to support a number of in-orbit pioneering European scientific, Earth observation, and navigation missions, including Mars Express, Sentinel(s), Gaia, CryoSat-2, LISA Pathfinder, ExoMars 2016, and Galileo.

Terma has been a recognized member of the space industrial community with in-orbit technology and solutions since 1972. We cover all phases of the mission lifecycle – from initial feasibility studies, through realization and operation to exploitation of the mission results.

Terma is contracted for the development and delivery of software and hardware systems and services for numerous ongoing and future European, Asian, and U.S. satellite missions. Examples of these are: BepiColombo and Solar Orbiter, both with expected launch in 2018; Euclid with expected launch in 2020; and JUICE with expected launch in 2022.

Also, Terma is under contract with OHB System AG for the SARah and the Electra missions in areas of both power electronics and software. For the highly sophisticated man-space ASIM observatory, Terma is technical prime under contract with the European Space Agency (ESA).

Space segment

- System integration
- Star Trackers and optical instruments
- Power electronics
- Remote Terminal Units
- Onboard software
- Central checkout systems

Ground segment

- Mission control systems
- Satellite simulators and processor emulators
- Flight dynamics

Engineering services

Terma provides specialist engineering services for spacecraft flight dynamics, operations engineering, Assembly, Integration and Test (AIT)/Assembly, Integration and Verification (AIV), specialist consultancy services, and IT support. Our engineers and specialists are located at Terma premises in Denmark, Germany, the Netherlands, UK, USA, and at numerous customer sites.

Specialized products and services

Terma is a renowned system integrator with capability to develop and deliver small spacecraft and complex instruments for larger missions. We participate in feasibility studies, as specialists, prime contractor, as well as integrator. The specialist areas include slotted waveguide antennae, optical instrumentation, and power subsystems.

Star Trackers and sensors – focusing on fully autonomous attitude determination with high accuracy. Different versions support missions ranging from satellites with short mission lifetimes to satellites having long lifetimes and stringent requirements for radiation tolerance. End customers include ESA, the U.S. Department of Defense, and ROSCOSMOS.

Electrical power management – state-of-the-art power designs covering power conditioning and distribution.

Power systems – Terma's power electronics are at work in virtually all ESA deep space and planetary missions including Mars Express, BepiColombo, ExoMars as well as in the Galileo IOV satellites. We are currently developing Power Condition and Distribution Units (PCDUs) for Euclid and for the SARah radar reconnaissance satellites. Our PCDUs range from 50 W to 14 kW.

Remote Terminal Unit's – a product line of modular Remote Terminal Units (RTU). The RTUs are applied as part of the data handling system of Earth observation, scientific, and telecommunication satellites, providing interfaces to equipment and sensors including heaters, thermistors, Attitude and Orbit Control System (AOCS) equipment, etc.

Flight software – Terma develops flight software for AOCS and data handling. We are presently developing the AOCS software for Solar Orbiter and OBC software for Sentinel-6/Jason-CS. We delivered the AOCS software for Herschel and Planck. We are also part of the software development for the ExoMars rover and have previously provided software for the European Robotic Arm (ERA) to be mounted on the International Space Station (ISS).

Satellite test software – products for integrated Electrical Ground Support Equipment (EGSE) systems at all levels of Assembly, Integration, and Test (AIT) – including instrument, platform, payload, and satellite level. Today, the majority of the checkout systems are based on our current Test Sequence Controller (TSC) / Central Control System (CCS5) product (see ccs.terma.com). We also supply specialized thermal data handling software.

Mission control systems – Terma provides control systems based on the ESA SCOS-2000 infrastructure and our own CCS5 product. We are also deeply involved in the next generation systems currently under development by ESA and European Industry – EGS-CC.

Simulators – Terma develops spacecraft simulators to support development of spacecraft (including software validation) as well as ground segment validation and operations training. We also develop T-EMU – a software based flight processor emulator (see http://t-emu.terma.com/).

World-class test and manufacturing facilities

Our facilities for flight hardware development include clean room, optical laboratory, environmental test facilities, including vibrators, thermal vacuum chamber, and conducted ElectroMagnetic Compatibility (EMC) test equipment. Our manufacturing facilities are certified for fully automated mounting of surface mount components as well as hand soldering of through-hole components.