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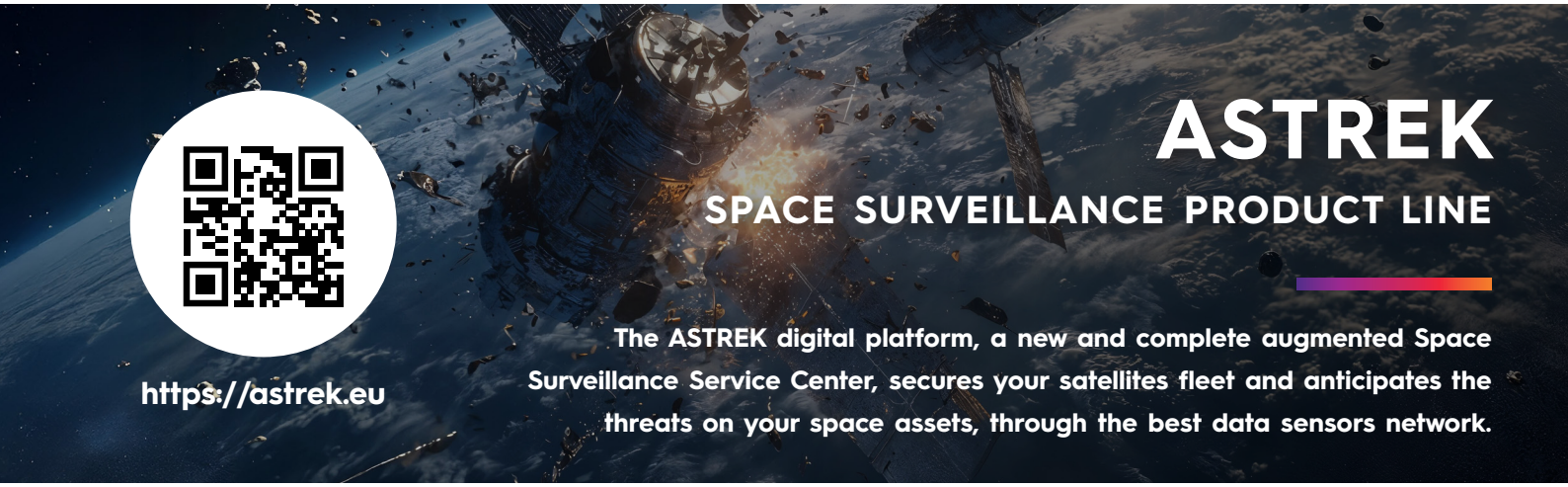


ASTREK

SPACE SURVEILLANCE PRODUCT LINE

https://astrek.eu

The ASTREK digital platform, a new and complete augmented Space Surveillance Service Center, secures your satellites fleet and anticipates the threats on your space assets, through the best data sensors network.

Built in and for the cloud, ASTREK relies on a Docker / Kubernetes micro-services architecture to deliver performance, scalability and business continuity.

ASTREK Space Surveillance Digital Platform and Services is built on **robust governance** and **effective cooperation** between **major space industry actors.** With a **multi-source approach** and an innovative platform, ASTREK aims to address **strategic challenges in space surveillance**, ensuring operational autonomy and **preparedness for future space security challenges.**

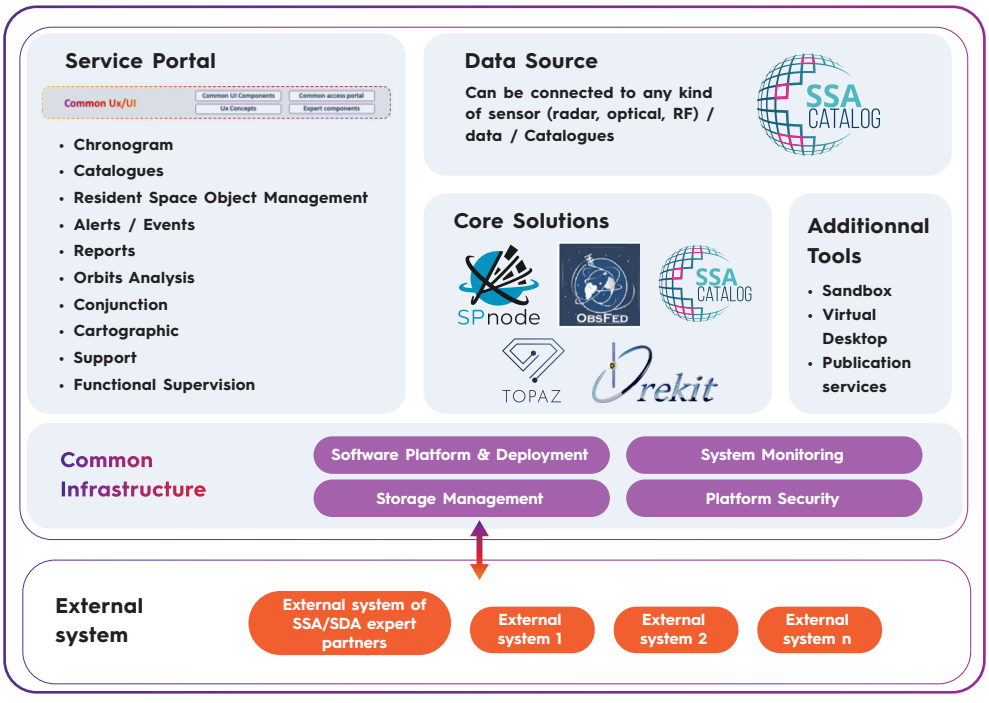
ASTREK implements a comprehensive range of services to ensure effective space surveillance, including:

- **Detection and tracking of orbiting objects:** Identifying new objects and continuously monitoring their trajectories.
- **Collision risk management:** Calculating impact probabilities and issuing **real-time alerts.**
- **Space debris monitoring:** Tracking and cataloging debris to anticipate risks and improve orbital safety.
- **Analysis of suspicious maneuvers:** Detecting abnormal satellite behaviors and **potential hostile actions.**
- **Evaluation of adversarial space capabilities:** Strategic intelligence on the evolving capabilities of other space-faring nations.

ASTREK is a range of **modular, cloud-native** space surveillance products based on the integration of **interoperable** CS Group technology components, enhanced by an **open technology sandbox** and **specific business services from external suppliers** to meet the functional and operational challenges of space surveillance.

ASTREK
SPACE SECURITY

ASTREK can be deployed as a **full end-to-end solution** or through **selected components** integrated into the **client's architecture**, either on-premise or in the cloud. Its **cloud-agnostic architecture** ensures **multi-cloud compatibility** without dependency on any provider, delivering **flexibility, portability, and avoiding vendor lock-in** or hardware constraints.



Use cases

Dual supported mission profiles for the ASTREK Product Line:

Space Surveillance & Tracking

ASTREK allows to know resident space objects (RSO) positions (satellites and debris) in orbit to avoid collisions, list and catalog by

- Sensor tasking
- Measurement association
- Data fusion
- Estimation of a confidence indicator.

Command & Control

ASTREK orchestrate your multi-domain activities like:

- OODA loop (Observe, Orient, Decide, Act)
- Threat management
- Decisonal workflow
- Operational planning & assessment

Mission Integration (C2 / C4)

Analytics & Decision making (SDA)

Processing (SSA)

Sensing (SST)

Space Situational & Domain Awareness

ASTREK offers analysis:

- Collision avoidance
- Re-entry analysis
- Fragmentation analysis
- Maneuver detection
- Conjunction analysis
- Rendezvous & Proximity Operations (RPO)

ASTREK features

Cloud native solution

ASTREK components are **built in and for the cloud** (relying on a Docker/Kubernetes architecture). Optimized to get the most of this architecture including cost savings, improved performances, resiliency, scalability and business continuity.

Flexible solution

Flexible architecture by design allowing an easy **integration of new features & services.**

Quick & smooth deployment

ASTREK components architecture is designed to be **Cloud Agnostic**. Solution is not tightly coupled to the features, services, or APIs of a particular cloud provider. This approach maximizes flexibility & portability, avoid any vendor lock-in and minimizes hardware infrastructure dependencies.

Full automation

All ASTREK components are based on a **microservices architecture,** with a **web-based user interface** (UI) and a service access system via REST APIs. ASTREK can therefore be **fully automated** thanks to its scheduler.

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