

RHEINMETALL**HERCULES 2.0**

STRATEGIC INMARSAT SATCOM MONITORING SYSTEM

CHALLENGE

The growing activity of so-called shadow fleets, together with the rising demand for reliable maritime intelligence and the protection of critical infrastructure, has significantly elevated the operational relevance of Inmarsat SatCom monitoring systems. Despite being a long-established satellite communication standard, Inmarsat services remain widely used across commercial shipping and aviation platforms worldwide — making them a key objective for COMINT missions.
Today's operational environments demand more than regional monitoring or limited collection of communication metadata. Effective intelligence operations depend on full-spectrum processing capability and the ability to cover multiple service types in parallel.

SOLUTION

Rheinmetall's HERCULES 2.0 Inmarsat SatCom Monitoring System delivers comprehensive fully passive interception capabilities for both circuit-switched and packet-switched (IP) metadata and content. The system covers a broad range of Inmarsat services, including BGAN, IsatPhone Pro/2, Inmarsat-C, and Classic Aero.
Built on an SDR architecture and deployed on Commercial Off-The-Shelf (COTS) hardware, HERCULES 2.0 ensures cost efficiency, rapid adaptation to emerging standards, and straightforward maintenance within existing infrastructure environments. The platform is designed for seamless integration into existing intelligence workflows.

PRODUCT OVERVIEW

A single HERCULES 2.0 system is all it takes to intercept multiple services on an Inmarsat I4 satellite. Built on a common RF signal distribution and hardware platform, the system delivers full interception capability at maximum efficiency with minimial footprint. Starting from BGAN service monitoring, it can be seamlessly extended to cover up to three additional I4 services — tailored precisely to customer requirements.

SUPPORTED SERVICES

Basic:

- BGAN: Circuit-switched and packet-switched metadata and content from terminals used in fixed, land-portable, maritime, land-mobile, and aeronautical settings

Extensions:

- IsatPhone Pro/2: circuit switched metadata and content
- Inmarsat-C: messages between maritime vessels and the ground station
- Classic Aero: messages between aeronautical terminals and the ground station, including ACARS and FANS 1/A content, voice calls between flight crews and air traffic control.

Scalability:

HERCULES 2.0 can be expanded with one or more Rheinmetall VICTORIA 2.0 remote spotbeam sensors, extending L-band coverage and enabling reception and processing of a significantly higher number of duplex connections.

Complementary Solutions:

As a valuable complement to HERCULES 2.0, Rheinmetall offers additional software applications that correlate metadata from various sensors or OSINT sources — such as AIS or ADS-B — for enhanced target tracking.
Depending on your needs, complementary products are also available for analysing the monitoring results. Customization to meet specific APIs can be provided upon request.

UNIQUE SELLING POINTS



SDR-based technology



Easy scalable system architecture to support monitoring of multiple SatCom services



Flexible exporter interface for easy integration with the customer's existing analysis system



Remote spotbeam sensors to expand L-band coverage in areas of interest



WHAT DO WE DO?

Trusted advisor — We guide you in selecting the systems and infrastructure best suited to your specific requirements

System Demonstration — On-demand demonstrations of HERCULES 2.0 and its extended capabilities, showcasing intuitive operation, performance and results

Integration Support — site surveys, measurements, installation, and configuration assistance

Training — Hands-on instruction covering installation, operation, and day-to-day use

Customer Service — Responsive technical support, preventive and corrective maintenance

Development — Continuous product and process enhancement to stay ahead of emerging threats

Rheinmetall Electronics GmbH
Brüggeweg 54 · 28309 Bremen · Germany · www.rheinmetall.com

Get in touch

intelligence@rheinmetall.com

D1272e09.26©Rheinmetall