RHEINMETALL ARTEMIS 2.0

DISTRIBUTED STRATEGIC IRIDIUM SATCOM MONITORING SOLUTION – NATIONWIDE DATA ACQUISITION FOR NATIONAL SECURITY

With increasing geopolitical volatility, securing national borders and critical regions or infrastructure demands constant, real-time surveillance capabilities. Homeland security and defence institutions are under increasing pressure to identify threats early and respond immediately.

Especially in permanent supra-regional surveillance operations, tactical monitoring solutions fall short: limited by range and possible visibility of the antenna. These systems are often difficult to adapt to changing operational needs – and attempts to relocate or expand them come with a high risk of exposure. Consequently, antenna locations are often suboptimal, which can negatively impact the system's overall performance.

The result: delayed decisions, surveillance blind spots and growing vulnerability in areas where awareness is most needed. A new approach is required with continuous, discreet and nationwide resilient data flow without constant personal intervention.

SOLUTION

Rheinmetall has developed a distributed strategic operational satcom monitoring system to support nationwide and beyond Iridium monitoring. The solution is being deployed for wide-area coverage to collect data from, e.g., critical regions or infrastructure and sensitive border areas of the own country or other areas of interest. The collected data is automatically and continuously sent to the headquarters for comprehensive evaluation. This enables a completely passive surveillance of the country and ensures seamless data collection.

PRODUCT OVERVIEW

The ARTEMIS 2.0 distributed sensors are small and ruggedized, with low power consumption and easy installation. They can therefore be placed in the most appropriate locations to maximize coverage of areas of interest. They can be operated in a wide range of environmental conditions, 24/7. The distributed sensors collect pre-processed Iridium data and forward them to the ARTEMIS 2.0 central unit.

The ARTEMIS 2.0 central unit processes all data to extract metadata as well as content. It can be seamlessly connected to multi-source analysis systems and monitoring infrastructures. The system can be flexibly deployed and easily scaled by adding further distributed sensors.

- **Fully passive monitoring**
- **Ruggedized, small form factor and low power consumption hardware**
- **Simple integration, installation and user-friendly**
- **Scalability**

WHAT DO WE DO?

Trusted advisor
Rheinmetall sees itself as a trusted advisor for all customers and supports the selection of the necessary infrastructure and systems based on customer requirements.

System demonstration
To illustrate the performance and reliability of ARTEMIS 2.0, Rheinmetall will demonstrate the system on request.

Integration support
Rheinmetall can advise customers on the selection of most appropriate locations for the ARTEMIS 2.0 distributed sensors by carrying out local measurements. Rheinmetall can support customers in setting up and building the system.

Training
Rheinmetall enables users to install, operate and use the system effectively.

Customer service
Rheinmetall offers fast support for technical issues and regular maintenance.

Development
Rheinmetall is constantly investing in its products and processes in order to keep pace with technological advances and new threats.

WHAT WILL YOU GET?

Complete system solution
Rheinmetall supplies a turnkey system that includes antennas, distributed sensors and a central unit.

Automated processes
ARTEMIS 2.0 automatically detects signaling and traffic channels over the complete Iridium bandwidth. It enables a fully passive interception and extraction of transmitted session data.

Long term support
The ARTEMIS 2.0 system design is based on commercial off-the-shelf hardware including software-defined radio (SDR) components, servers and embedded computers. This approach enables long term operation of the system and minimizes the obsolescence risk.

Scalability
The distributed sensors design of ARTEMIS 2.0 makes it easy to extend duplex coverage by adding further distributed sensors in appropriate locations.

Invisible installation
The distributed sensors can be installed alongside a small antenna on a mast or wall outdoors. Their small form factor, minimal power consumption and inconspicuous design enable them to be placed in any appropriate location to maximize coverage of areas of interest.

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