

ROHDE & SCHWARZ

Make ideas real



ADVANCED SATCOM MONITORING

R&S®SATCOM Link Observer: satellite communications monitoring solution for armed forces

AT A GLANCE

- ▶ **Customer:** Undisclosed armed forces
- ▶ **Task:** Ensuring an efficient and reliable military satellite communications (SATCOM) system
- ▶ **Challenge:** Ensure uninterrupted data transfers, identify operational constraints, provide early warning of communications degradation
- ▶ **Solution:** R&S®SATCOM Link Observer offers convenient quality of service monitoring with advanced signal detection and classification
- ▶ **Key benefits:** Convenient workflow management system for commissioning, monitoring, and analysis; reliable system control through a client-server architecture for remote and distributed applications; personalized designs: from compact and cost-effective solutions to sophisticated, complete system solutions

The customer and platform

The armed forces of an undisclosed country recently modernized their satellite communications (SATCOM) system to more effectively transmit information. A SATCOM system is crucial to transferring data to and from forward operating bases.

SATCOM serves as a communications backbone for armed forces to transmit data over long distances via satellite to local networks in countries where they operate. The space segment mainly uses geostationary Earth orbit (GEO) satellites, while ground-based deployable SATCOM stations in different configurations are used to transmit video files, voice data and other crucial information from forward areas to rear headquarters.

Uninterrupted communications is vital for these transfers. Morale, welfare and recreation (MWR) services also rely on SATCOM. Mission-critical communications, including both operational and MWR services, are essential for successful missions and the well-being of personnel.

For more information, visit
www.rohde-schwarz.com





The R&S®GSACSM software core of the R&S®SATCOM Link Observer

R&S®SATCOM Link Observer

- ▶ RF and baseband analyses
- ▶ Autonomous carrier monitoring
- ▶ Detection and analyses of interfering signals
- ▶ Convenient integration

Customer situation and requirements

To establish and operate secure data and voice connections as well as MWR services over long distances, armed forces rely on SATCOM and other systems. A SATCOM system enables the exchange of various types of data from forward areas to the rear. Different ground station variants were used and have now been modernized and upgraded with the latest technology.

Armed forces are responsible for their complete communications infrastructure, including planning, establishing satellite connections, operating and troubleshooting. Commercial providers delegate these complex tasks and also have a larger available workforce. The military must manage such complexity on its own, often under extreme conditions.

Rohde & Schwarz solution

R&S®GSACSM communication system monitoring software forms the core of the R&S®SATCOM Link Observer and combines classic spectrum analyzer functions, 24/7 alarm triggering systems, advanced signal detection, signal analysis, signal classification and more.

The software suite helps reliably monitor communications quality and identify operational constraints. It also helps with the challenges of non-standardized SATCOM systems, evolving industrial activities, mission-critical communications links, as well as interference from

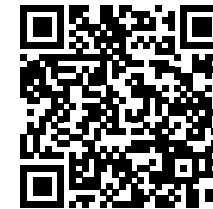
sources such as jamming, operator error during setup and the natural environment. Thanks to automatic configuration and error detection, R&S®SATCOM Link Observer helps maintain reliable and secure communications links in the face of such challenges.

R&S®SATCOM Link Observer has an interface to communicate with remote Rohde & Schwarz sensors and users can access devices from around the world. More resilient military SATCOM systems are possible thanks to continuous measurements and error detection.

R&S®SATCOM Link Observer reduces errors and lowers failure response times with automatic error detection and correction to quickly identify and resolve errors and minimizes their impact on operations.

Learn more about the SATCOM monitoring solutions from Rohde & Schwarz

www.rohde-schwarz.com/SATCOM-monitoring



The R&S®MSR4 multipurpose satellite receiver of the R&S®SATCOM Link Observer

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 Advanced SATCOM monitoring
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