

ROHDE & SCHWARZ

Make ideas real



R&S®SATCOM Link Observer

COMPACT SOLUTION FOR QUALITY OF SERVICE MONITORING

R&S®MSR4 multipurpose satellite receiver and R&S®GSACSM communications system monitoring software. Seamless combination of hardware and software customizable to individual requirements.







INNOVATIVE TECHNOLOGY FOR FLEXIBLE AND SECURE OPERATIONS

In an ever-evolving communications landscape, staying connected via satellite is crucial for various industries. Critical infrastructures (such as power companies) often secure their networks with very small aperture terminal (VSAT) systems. General upgrading of the national infrastructure is driving growth in demand for SATCOM in the public sector. Militaries also use SATCOM for beyond-line-of-sight (BLOS) communications in challenging operational environments. SATCOM plays a pivotal role in connecting remote areas, providing essential services during emergencies, and enabling global connectivity for businesses, governments and armed forces.

The market for low Earth orbit (LEO) satellites is growing steadily. More and more providers entering the field has led not only to a higher number of different standards and local certifications but has also created more complexity in the market. The result of this growth in the SATCOM industry is that options for data transfer in non-terrestrial networks are increasingly in competition with terrestrial options as markets continue to expand worldwide. At the same time, governments are contributing to this expansion through the development of their own national solutions to ensure communications security. Tapping this enormous potential, these developments have led to a general growth in the total number of installed satellite terminals and an explosion in the number of satellite links in the spectrum.

THE ALL-IN-ONE QUALITY-OF-SERVICE MONITORING SOLUTION

The R&S®SATCOM Link Observer from Rohde&Schwarz provides operational satellite communications monitoring, a seamless combination of hardware and software to support customers in their daily tasks and challenges.

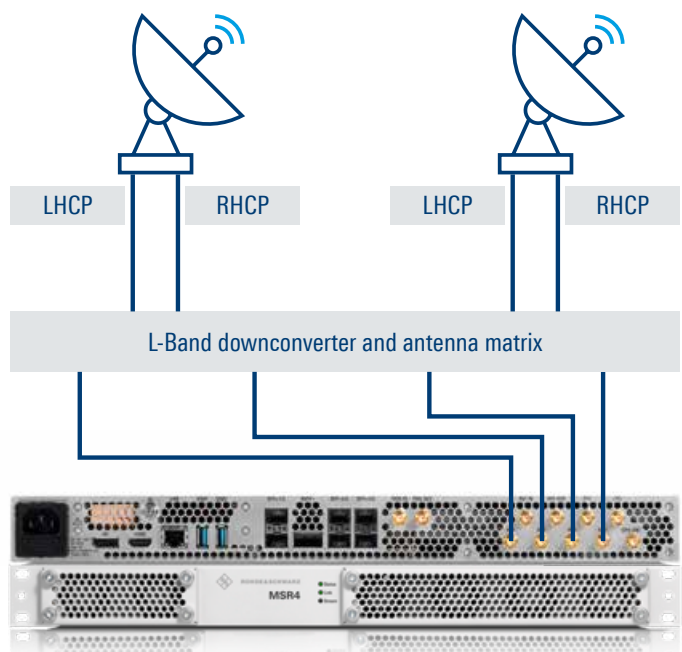
The solution includes the R&S®MSR4 multipurpose satellite receiver and R&S®GSACSM communications system monitoring software suite. The R&S®SATCOM Link Observer is software-defined defence, enabling continuous performance improvement over its lifetime.



R&S®MSR4 Multipurpose Satellite Receiver

The R&S®MSR4 multichannel receiver is optimized for SATCOM applications with four individually tunable L-Band inputs, each with 200MHz bandwidth. The receiver's compact size, onboard communications monitoring system hosting and cutting-edge RF performance, make it ideal for the R&S®SATCOM Link Observer.

Figure 1: Link Observer Installation Example





R&S®GSACSM Communications System Monitoring

R&S®GSACSM is a software solution for remote spectrum monitoring and signal analysis. The software supports classic spectrum analyzer functions, trapping systems, as well as advanced signal detection and identification algorithms. The user management system predefines measurement jobs to comfortably guide other users through work routines for user friendly, quality of service monitoring with the R&S®SATCOM Link Observer, even in tough situations.

Included features

Type	Order Number	Description
R&S®MSR4	3066.8550.03	1HU, 19" Receiver Hardware RX1 to RX4 receive channels 500 MHz to 3 GHz GNSS reference input
R&S®MSR4-CSMRX	3075.3429.02	License to unlock all 4 receive channels
R&S®GSACSMSVR	3065.3526.02	CSM software server ► Sensor control ► User management and license control
R&S®GSACSMCLNT	3065.3510.02	CSM software client ► Integration within a CSM server network ► User interface for program control
R&S®GSACSMANA	3065.3490.02	Analysis Mode ► Signal analyzes to classify the modulation scheme based in IQ snapshots ► Report of signal parameters ► Display of constellation diagram ► Export of PDF report
R&S®GSACSMMEAS	3065.3478.02	Measurements option including ► Record and replay of I/Q snapshots ► Setup of alarm triggers ► Continuous carrier monitoring ► Eventlog ► Automatic carrier detection
R&S®SATCOMSRV	n.n.	Service Level Agreement including repair coverage and software maintenance

ASSISTANCE IN KNOWN AND UNKNOWN SIGNAL ENVIRONMENTS

Benefits

- ▶ The R&S®SATCOM Link Observer can be conveniently operated with a modern, adaptive GUI and guided workflows for the implementation of operator defined use cases.
- ▶ Operators can detect upcoming signal degradation, giving them time to react and ensure quality of service.
- ▶ The R&S®SATCOM Link Observer has sophisticated signal analysis and troubleshooting capabilities to react quickly and reestablish communications.
- ▶ As a software-defined device, the R&S®SATCOM Link Observer can add several features without any hardware changes.

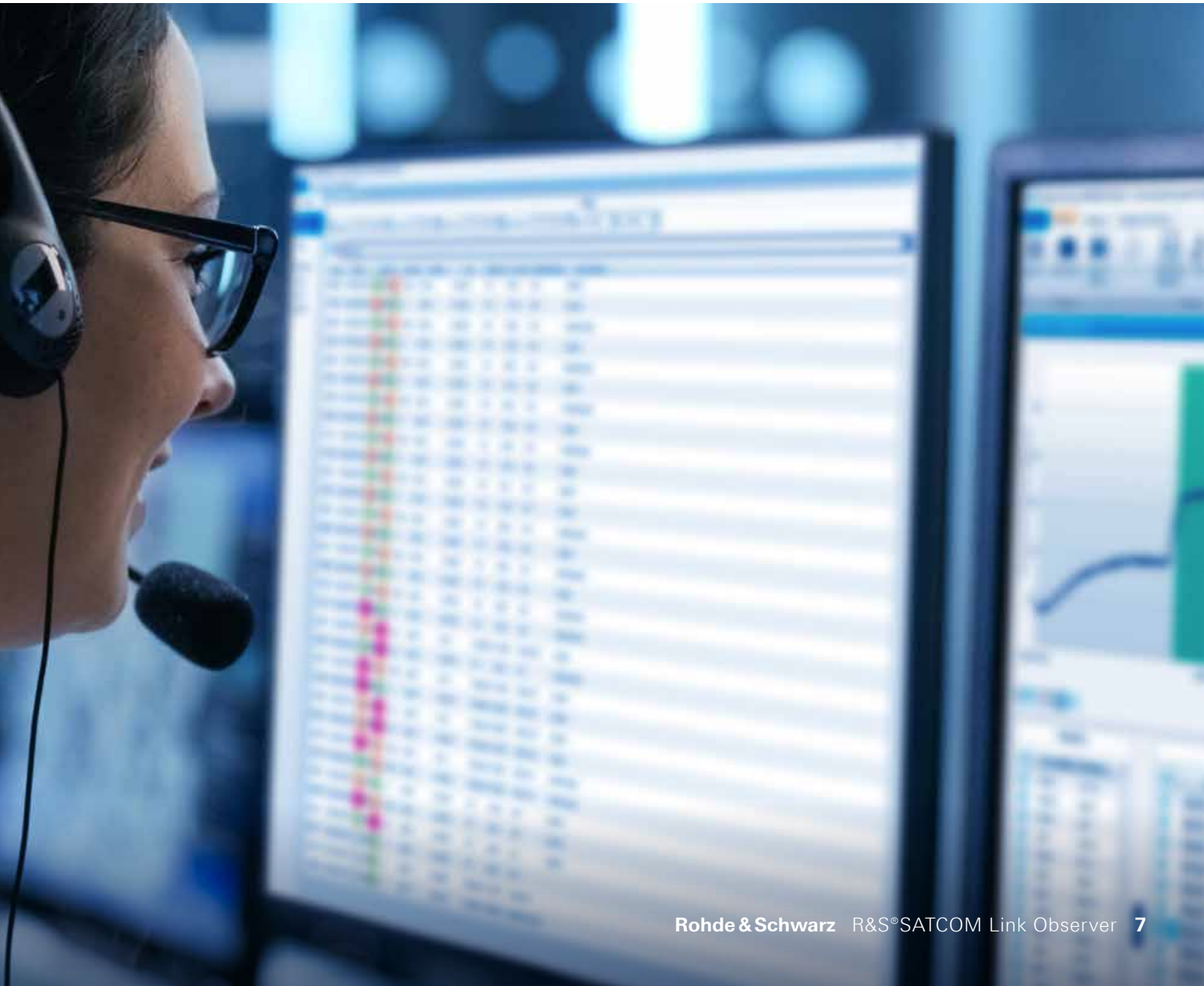


Highly flexible remote spectrum monitoring

The server client concept allows users to access an R&S®SATCOM Link Observer from anywhere in the world, even via satellite. Users can monitor up to four inputs with the same device for greater flexibility. Various RF trace representations enable quality parameter measurements in the RF spectrum, allowing for continuous monitoring in tables and masks and export reporting capabilities.

User friendly visualization for satellite transponder analyses

The R&S®SATCOM Link Observer autonomously scans transponder signals and identifies carriers, which are visualized in color-coded charts and lists. The chart and list elements make identifying each carrier easy. The solution uses I/Q data for signal analysis and parameter reporting. A constellation diagram as well as a comparison of C/N to SNR can also be displayed to detect even baseband irregularities.



Rohde & Schwarz

The Rohde&Schwarz technology group is among the trailblazers when it comes to paving the way for a safer and connected world with its leading solutions in test&measurement, technology systems and networks&cybersecurity. Founded 90 years ago, the group is a reliable partner for industry and government customers around the globe. The independent company is headquartered in Munich, Germany and has an extensive sales and service network with locations in more than 70 countries.

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R&S®SATCOM Link Observer – Compact solution for quality of service monitoring

Data without tolerance limits is not binding | Subject to change

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