ROHDE&SCHWARZ

Make ideas real



BORDER PROTECTION WITH R&S®CEPTOR

R&S®CEPTOR is comprehensive monitoring software for border RF surveillance sensors with end-to-end capabilities for intuitive situational awareness.

AT A GLANCE

- ► Indispensable for border protection
- ► Proven Rohde & Schwarz technology from a single source
- Cost-effective solution
- Provides situational awareness and end-to-end capabilities
- On-the-move solution adds an initial spectral awareness layer
- ► Use case oriented user interface and workflow
- ► End-to-end control of entire border RF surveillance
- ► RF situational awareness in the field right where it is needed



Situation and requirement

Closely monitored national borders give the military and police a strategic and tactical advantage. Preventing the global surge of contraband from crossing borders is a challenge for customs enforcement and border patrols. To counter illegal activity, authorities are using airborne, stationary or vehicle-integrated mobile border surveillance systems to intercept valuable data and prevent crime in their borderlands. Passively monitoring RF transmissions also increases situational awareness and improves intelligence on the border. RF surveillance is vital to border protection.

Rohde & Schwarz solution

The R&S°CEPTOR radiomonitoring system software helps protect against the latest and most serious threats and indicates potential border security breaches by detecting suspicious emissions in the electromagnetic spectrum. The solution can be tailored to user needs and is designed for ease of operation. The result is a compact form factor, low weight and lower lifecycle costs. Forward-looking, future-proof design and software defined architecture simplify operations for successful missions.

R&S°CEPTOR uses the electromagnetic spectrum to gather intelligence, accurately identify threats and protect borders. The fully digital and flexible design makes spectrum surveillance easier for users with a new, use-case-driven approach in a single package.

R&S°CEPTOR together with the R&S°UMS400 universal monitoring system are ideal for border protection. R&S°UMS400 stations can easily be installed on masts along coasts or border areas, wherever power and data links or cellular networks are available. The detached stations are then controlled from a central R&S°CEPTOR station at headquarters.







The R&S°UMS400 universal monitoring system has a ruggedized network capable receiver with a native frequency range of 8 kHz to 8 GHz (expandable to 20 GHz with an optional R&S°CS-MC20 microwave converter for easy platform integration). The receivers are high quality surveillance stations with minimal infrastructure requirements. They have an on-board PC and can be integrated into existing R&S°CEPTOR system solutions.

Results and achievements

Rohde & Schwarz added on-the-move capabilities for surveying expansive border regions that can be done with both fixed deployments on masts or mobile deployments as part of vehicle patrols. The on-the-move solution provides security forces with an initial spectral awareness layer. The data can help detect pattern changes in spectral activity and illicit activity.

The tool is designed for easy deployment and operation. The R&S°UMS400 provides a highly integrated system optimized for the application. Combined with R&S°CEPTOR software, only limited training is needed for operation.

The solution has a wide range of mission antennas optimized for known spectral areas or for wide spectral HF surveys up to 20 GHz.

When fully integrated, R&S°CEPTOR provides full RF situational awareness to border protection officers. The modern and modular user interface combines R&S°UMS400 and Rohde & Schwarz communications systems into a cost-effective, end-to-end solution.



R&S®CEPTOR provides a real-time overview of the electromagnetic environment and can log any emission between 8 kHz and 20 GHz.



R&S®UMS400 universal monitoring system.

www.rohde-schwarz.com | www.rohde-schwarz.com/support | www.training.rohde-schwarz.com

R&S® is a registered trademark of Rohde & Schwarz GmbH & Co. KG
Trade names are trademarks of the owners
Border protection with R&S®CEPTOR
PD 5216.3895.32 | Version 01.00 | September 2022 (ch)
Data without tolerance limits is not binding | Subject to change
© 2022 Rohde & Schwarz GmbH & Co. KG | 81671 Munich, Germany