

# ROHDE & SCHWARZ

Make ideas real

## R&S®CEPTOR

### The Complete Defense EME Solution



#### History

Rohde & Schwarz (R&S) has been a staple in the U.S. spectrum management community for more than 15-years with hundreds of R&S®PR100 handheld receivers deployed within the Department of Defense. Rohde & Schwarz continues to invest in tools that provide higher degrees of versatility and usability. While deconfliction of the electromagnetic environment (EME) remains an important task, today's tools need to monitor the EME 24/7, provide alerts when rogue signals appear, instantaneously locate and analyze detected signals, and provide insight for EMCON decisions. For this reason, Rohde & Schwarz embarked on a significant development effort to aggregate key capabilities into one cohesive software platform resulting in a software suite called R&S®CEPTOR. R&S®CEPTOR provides **electronic warfare specialists, SIGINT analysts, and spectrum managers** both online and offline operational capabilities to help them understand and characterize the electromagnetic spectrum.

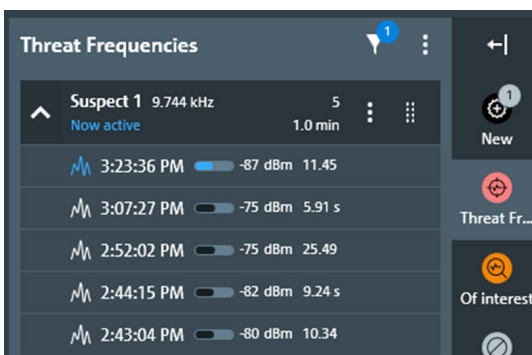
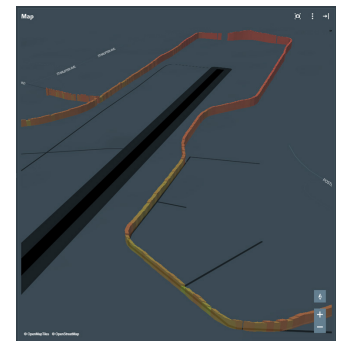


#### Real Time Spectrum Awareness

R&S®CEPTOR provides a real-time picture of the EME and can catalog any emission between 8 kHz – 20 GHz (soon 33 GHz). Spectrum Managers can import their database records to easily differentiate blue emitters from red and gray emitters. Additionally, users can configure alerting functions in R&S®CEPTOR to automatically demodulate and direction-find (DF) when a signal of interest appears.

#### R&S®CEPTOR for EMCON

R&S®CEPTOR makes it easy to get a true **measured** picture of all in-use frequencies and their RF "footprint." This information can be passed to commanders to aid in emissions control decisions. R&S®CEPTOR can also pass information to EW support tools such as **EWPMT** and **RaptorX**.



#### Pattern of Life Analysis

R&S®CEPTOR catalogs every emission in the search bands so that an operator can easily see when an emitter is on and for how long. This can be helpful when analyzing enemy pattern of life or when trying to determine if your own emissions are exposing blue force maneuvers. R&S®CEPTOR provides EMS operators the ability to identify OPSEC indicators related to the electromagnetic spectrum. Effectively identify what information can be seen by the enemy.

## A Future-Proof Tool

Rohde & Schwarz has supported ES, EA, and MI mission sets for over 30-years. R&S®CEPTOR brings together these tools in a unified platform. In addition to the powerful feature sets of R&S®CEPTOR, the following capabilities will be available soon. Please contact your R&S Specialist for price and delivery information.

## Get a Fix on the Go

With Rohde & Schwarz's proprietary Mobile Locator algorithm it is possible to get a quick fix on an emitter with only a single node on the move. Simply mount the direction-finding antenna on a vehicle and go. The software will process ten lines of bearing per second in order to tell you which direction to drive and ultimately where the emitter is located.



Classification result details	
Last 2 classification results	
Created A few seconds ago	
Class. frequency	461.700007 MHz
Class. bandwidth	6.250 kHz
Class. power level	-86 dBm
Class. SNR	34.7 dB
Modulation	FSK4
Transmission system	NXDN
Confidence	100.00 %
More details	
Symbol rate	2,400.00 Bd
Shift	700 Hz 700 Hz 700 Hz
Tone count	4
Created A few seconds ago	
Class. frequency	461.700022 MHz
Class. bandwidth	6.250 kHz
Class. power level	-86 dBm
Class. SNR	34.5 dB
Modulation	FSK4
Transmission system	NXDN
Confidence	100.00 %
More details	

## Signals Intelligence

With the new R&S®CEPTOR Signal Identification module, operators can automatically identify the transmission system responsible for a given emission. R&S®CEPTOR looks deep into the signal's I/Q data to analyze signal characteristics such as modulation type and symbol rate in order to output a transmission system e.g. STANAG 4285, APCO-25, GSM, and over 200 others.

## Instantaneous Geolocation

When multiple nodes are networked together, it is possible to get an instantaneous cut or fix on a signal of interest. Intersecting lines of bearing coming from fixed or mobile sites indicate the geolocation of an emitter.

## PR200 Overview

R&S®CEPTOR is powered by the RF performance of the PR200 portable monitoring receiver. A high-performance portable monitoring receiver such as the PR200 can effectively help identify undesired sources of signals in the shortest possible time and greatly reduce the effort required to locate it. The PR200 is a perfect balance of RF performance, speed, SWaP and usability that addresses the challenges in spectrum monitoring and emitter geolocation.



PR200 with HE400 Directional Antenna and remote control app

## PR200 Key Facts

- Detect Analyze and locate RF signals from 8 kHz to 20 GHz (soon 33 GHz)
- 40 GHz/s scan speed
- High RF performance optimized for use in dense spectrum environments thanks to sub-octave preselection and automatic overload protection
- Intuitive operation with application-oriented user interface
- Built in GNSS including multiple constellations for use in GPS-denied environments
- Quick disconnect cables for both data and RF connectors
- Low SWaP and extended battery life

For additional information please contact Gabe Hartwig | 404.307.7087 | gabe.hartwig@rsa.rohde-schwarz.com