

ROHDE & SCHWARZ

Make ideas real



COUNTERING DRONES

Protecting critical infrastructure



SECURITY
SCREENING



COUNTER UNMANNED
AERIAL SYSTEMS
(C-UAS)



AIR TRAFFIC
CONTROL



CELLULAR NETWORK
ANALYSIS



CYBERSECURITY

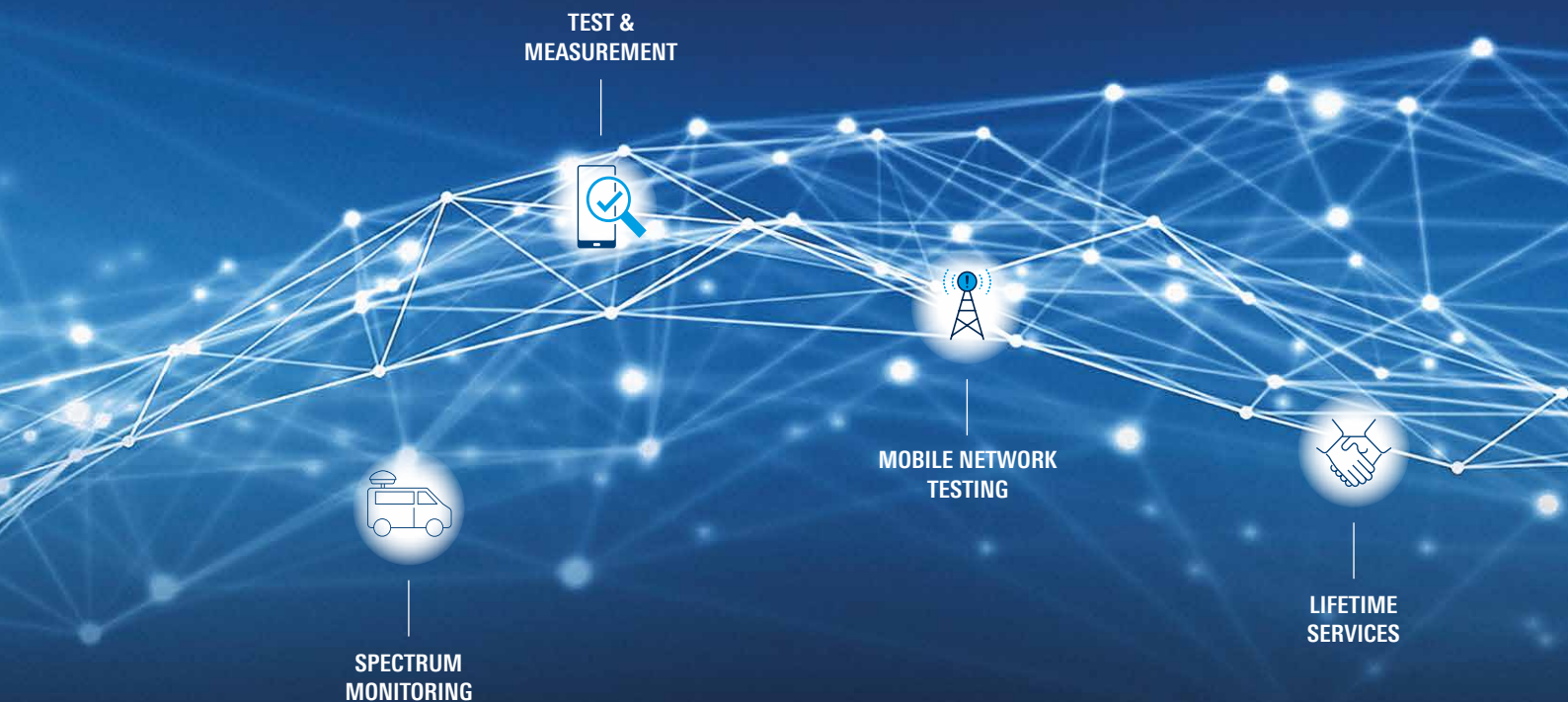


SYSTEM SOLUTION PARTNER

When it comes to integrating tomorrow's technology to respond to today's threats, Rohde&Schwarz is your partner of choice.

As a systems integrator and original equipment manufacturer of core components, our independent company delivers trusted, turnkey solutions supported by systems engineering; project implementation; and after-sales services.

Creating unparalleled synergies across critical national infrastructure, Rohde&Schwarz enables best practice through the availability of reliable and cost-effective technologies to ensure operational success where it is needed most.



COUNTERING DRONES

The proliferation of malicious and non-cooperative drones threatens critical infrastructure. Whether at government buildings, airports, energy or industrial facilities, dams or harbors – civil and government organizations require affordable and reliable counter-drone solutions.

Rohde&Schwarz is proud to offer critical infrastructure customers a next-generation leap in counter-drone technology through the application of a cost-effective, system-of-systems approach, capable of autonomously detecting, classifying and neutralising modern threats.

ENSURING PROSPERITY

In this age of strategic competition, governments rely heavily on a national network of facilities, sites, assets and technologies to ensure national security and prosperity..

PROTECTING THE HOMELAND

When it comes to countering drones, time is of the essence. Malicious or non-cooperative drones must be detected as early as possible to give decision makers the maximum time possible to respond to threats and avert potentially disastrous consequences.

When protecting critical infrastructure, however, it is essential to avoid any negative impacts on day-to-day operations, which can threaten economic prosperity.

Airports

**INFORMATION
SUPERIORITY**

**Energy and
industrial
infrastructure**

**Government
buildings**

AIRPORT PROTECTION

Today, malicious and non-cooperative drones can easily enter controlled airspaces and disrupt aircraft in the air and on the ground. These intrusions not only endanger human lives, they can also cost airports significant amounts of money when services are disrupted.

It is therefore imperative that air navigation safety providers (ANSPs) deploy effective counter-drone solutions to ensure air traffic is safely managed at national and international airports.

Counter-drone solutions tasked with protecting airports must be capable of covering large areas of open ground, deconflicting with aircraft and ground vehicles, and even distinguish between UAS and wildlife. They also have to be capable of locating drone pilots, so that authorities can prevent future threats.


BENEFITS SHOULD INCLUDE:

- ▶ Early detection of pilots and drones (including swarms)
- ▶ Extended range and 360-degree coverage
- ▶ 24/7 protection
- ▶ Networked deployment
- ▶ Detection of piloted and autonomous drones
- ▶ Non-kinetic countermeasures
- ▶ Cost efficiency
- ▶ System security, reliability and robustness
- ▶ Integration with uncrewed traffic management (UTM) systems
- ▶ Deconfliction with other sensors









ENERGY AND INDUSTRIAL INFRASTRUCTURE

Whether located on land or at sea, energy and industrial infrastructure is easily threatened by malicious and non-cooperative drones.

When drones cause damage to infrastructure, the consequence can be significant economic harm, production stoppages, or other knock-on effects that can result in large government capital expenditures to repair damaged facilities.

Counter-drone solutions are ideally suited to protecting a wide range of critical infrastructure sites, including nuclear power stations, oil & gas platforms, dams, harbors and pipelines.

SYSTEM REQUIREMENTS:

- ▶ Early detection of pilots and drones (including swarms)
- ▶ Extended range and 360-degree coverage
- ▶ 24/7 protection
- ▶ Multi-domain capability
- ▶ Cost efficiency
- ▶ System security, reliability and robustness
- ▶ Open architecture
- ▶ Autonomous and human-in-the-loop operation

GOVERNMENT INFRASTRUCTURE

Governments are responsible for a wide network of infrastructure at home and abroad.

Buildings must be protected against non-cooperative drones, which can disrupt services, and malicious drones, which can be used to gather intelligence or carry out attacks against government property or personnel.

Counter-drone solutions must therefore be capable of protecting government buildings across a wide variety of operating environments, including urban areas, without interfering in critical services.

SYSTEM REQUIREMENTS:

- ▶ Early detection of pilots and drones (including swarms)
- ▶ 24/7 protection
- ▶ Networked deployment
- ▶ Detection of piloted and autonomous drones
- ▶ Non-kinetic countermeasures (human-in-the-loop)
- ▶ Cost efficiency
- ▶ System security, reliability and robustness
- ▶ Open architecture
- ▶ Deconfliction with other sensors





ROHDE & SCHWARZ ARDRONIS FAMILY:

ARDRONIS is a family of counter-drone solutions specifically designed to support the operational requirements of civil and government organizations charged with protecting critical national infrastructure..

The Rohde&Schwarz system-of-systems approach provides customers with the ability to detect, identify, locate, track, verify and counter malicious and non-cooperative threats in line with their unique user requirements.



ARDRONIS DETECT

ARDRONIS Detect accurately detects and classifies any type of drone, providing end users early warning of threats by recognizing RF signals even before take-off. The solution is lightweight and easily deployable, making it the ideal solution to support a wide range of use cases across critical national infrastructure.



ARDRONIS LOCATE COMPACT

Suitable for large area detection of malicious and non-cooperative drones, ARDRONIS Locate Compact features a single-channel direction finder which is capable of locating analog and digital video downlinks. ARDRONIS Locate Compact is a rapidly deployed and cost-effective solution for civil and government customers and particularly suited to supporting the protection of airports.



ARDRONIS LOCATE ADVANCED

Users benefit from automatic detection and identification of radio controlled drones. ARDRONIS Locate Advanced provides early warning and accurate threat classification with predefined, real-time notifications to selected individuals. The solution, which includes capability to locate and track FHSS signals, can geolocate drones and ground control stations.



ARDRONIS EFFECT

ARDRONIS Effect detects drones and, by analyzing the control link, intelligently generates targeted jamming signals to disrupt drone communications. It delivers powerful performance across a wide frequency range with high output power. ARDRONIS Effect can jam multiple bands simultaneously and make use of custom waveforms to effectively address evolving threats, thereby preventing unauthorized drones from entering protected areas.



ARDRONIS WI-FI

The ARDRONIS Wi-Fi is the perfect solution to detect, identify and mitigate Wi-Fi controlled drones and decode emitted identification data. With this functionality ARDRONIS Wi-Fi is a perfect upgrade for other sensors in the ARDRONIS family. The solution displays an approximate direction of the detected signal. ARDRONIS Wi-Fi identifies the drones by using information provided by their transmitted RemoteID. Depending on the national regulations, the Remote ID includes information such as its unique identifier, GNSS location, speed and altitude.



ARDRONIS PAN-TILT-CONTROL

The range of ARDRONIS solutions can be upgraded with optional ARDRONIS Pan Tilt Control which enables automated pan-tilt-control of directional sensors to verify and counter drone threats.



ROHDE & SCHWARZ: YOUR TRUSTED PARTNER

Counter-drone requirements are constantly evolving. As a trusted partner, Rohde&Schwarz provides customers with unrivalled support throughout the entire lifecycle of their product line.

As an independent company, we are perfectly positioned to provide the highest levels of in-service support to assist customers with the integration, maintenance and upgrade of counter-drone solutions.

Our support network extends over many different time zones around the world, enabling 24-hour support whenever it is required.

SERVICES & TRAINING

Although the ARDRONIS family of counter-drone solutions are designed for ease-of-use, Rohde&Schwarz remains committed to supporting the training requirements of customers seeking to protect critical infrastructure.

The company offers both on- and off-site training programmes which allow customers to understand and problem-solve in their own work environments.

Rohde&Schwarz also supports customer-defined training objectives through specialist and customised training programmes which are tailor-made to match specific end user requirements.

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Service at Rohde & Schwarz You're in great hands

- ▶ Worldwide
- ▶ Local and personalized
- ▶ Customized and flexible
- ▶ Uncompromising quality
- ▶ Long-term dependability

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.

www.rohde-schwarz.com

Sustainable product design

- ▶ Environmental compatibility and eco-footprint
- ▶ Energy efficiency and low emissions
- ▶ Longevity and optimized total cost of ownership

Certified Quality Management

ISO 9001

Certified Environmental Management

ISO 14001

Rohde & Schwarz training

www.training.rohde-schwarz.com

Rohde & Schwarz customer support

www.rohde-schwarz.com/support

