

For more than 80 years, Rohde & Schwarz has stood for quality, precision and innovation in all fields of wireless communications.

Rohde & Schwarz is strategically based on five pillars: test and measurement, broadcast and media, cybersecurity, secure communications, radiomonitoring and radiolocation. With this business strategy, the company can address diverse market segments, ranging from wireless communications, the broadcasting and electronics industry, aerospace and defense, to homeland security and critical infrastructure.

Headquartered in Munich, Germany, Rohde & Schwarz is among the world market leaders in all of its business fields. It is also the world's leading manufacturer of wireless communications and EMC test and measurement equipment, and broadcasting and T&M equipment for digital terrestrial television.

Rohde & Schwarz values long-term partnerships and believes in bringing services close to the customer. With some 10,000 employees in more than 70 countries worldwide, it is easy to find a Rohde & Schwarz representative near you.

# Secure Radiomonitoring and communications radiolocation Spectrum monitoring (Radio) communications systems and systems for air traffic radiomonitoring control (ATC) and equipment for regulatory authorities armed forces as well as for homeland and external security

#### Our business fields

### Test and measurement

T&M instruments and systems for wireless communications, general purpose electronics and aerospace and defense applications

#### Broadcast and media

Broadcast, T&M and studio equipment for network operators, broadcasters, studios, the film industry and manufacturers of entertainment electronics

#### Cybersecurity

Security products to protect IT infrastructure against cyber attacks

# Singapore Your gateway to Asia and the Pacific region



#### Major milestones in Singapore

Rohde & Schwarz Support Centre Asia was established

#### 2002

R&D centre was set up Rohde & Schwarz Regional Headquarters Singapore was established

#### 2005

Launch of Regional Customer Support & Application Centre

#### 2008

Relocation to new building at HansaPoint@CBP with 5,000 sqm of office space

#### 2010

Launch of Rohde & Schwarz Asia as part of a global strategic expansion in Asia

#### 2011

First production facility outside Europe was set up in Singapore

Production facility was expanded to Malaysia

Inauguration of Das Spektrum@CBP, seven-storey Rohde & Schwarz building

Rohde & Schwarz established its presence in Singapore in 1997, offering state-of-the-art solutions to our customers in all our business fields. The advantage of local and regional expertise coupled with a strong network of subsidiaries in Asia establishes our reputation as a trusted partner.

As an integral part of our global strategy, our operations in Singapore have grown to match market demands. Today, Rohde & Schwarz in Singapore offers well-established capabilities in R&D, production, system engineering, supply chain management and procurement services.

#### Rohde & Schwarz Regional Headquarters

Since 2002, Rohde & Schwarz Regional Headquarters Singapore has been responsible for the sales and services network in the Asia Pacific region.

Today, almost half of Rohde & Schwarz net revenue comes from this region. With over 16 subsidiaries and more than 1,000 employees, we are committed to serving our customers by providing market-leading solutions for cutting-edge technologies and after-sales support.



Rohde & Schwarz in Singapore 3

# Our test and measurement portfolio: T&M solutions for all wireless technologies Testers for wireless devices and Systems for conformance and acceptance testing in line with all standards and test criteria T&M solutions for network optimization Signal and spectrum analyzers Network analyzers Oscilloscopes -ano Signal generators Coverage measurement systems EMC and field strength test solutions Power meters and voltmeters Audio analyzers Modular instruments Power supplies RF and microwave accessories System components Broadcasting and video T&M and monitoring solutions

## Test and measurement

T&M equipment for wireless communications, general-purpose electronics, and aerospace and defense (A&D) applications

Rohde & Schwarz is the leading supplier of test and measurement (T&M) equipment for the wireless communications industry. Regardless of the technology, the company offers a complete product portfolio for the development and production of chipsets, mobile terminal equipment and base stations. Our solutions smooth the way to 5G and a converged wireless world. Manufacturers of general-purpose electronics as well as A&D customers use our broad portfolio of radio frequency (RF) and microwave T&M solutions to develop their products on time and in line with specifications.

#### EMC test systems

An important aspect of product design is the need to meet legal and functional electromagnetic compatibility (EMC) requirements. Rohde & Schwarz is the market leader in this special field and offers a complete EMC test portfolio, from standalone devices to turnkey solutions with test chambers, covering all relevant test standards for the commercial, automotive, wireless and military industries.

- ← Highly automated EMC test solutions for the automotive industry.
- R&S®CMW500 wideband radio communication tester on a smartphone production line.





## Broadcast and media

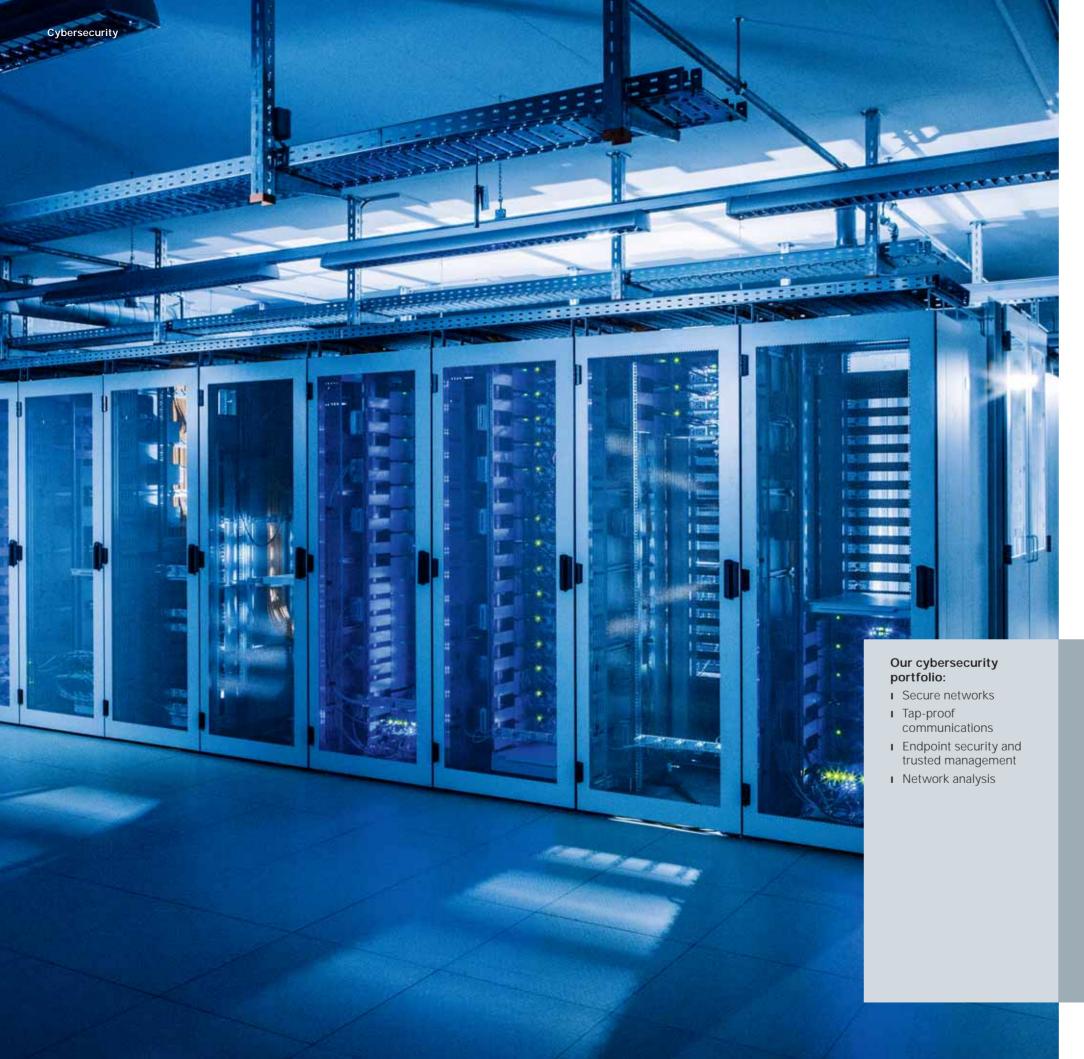
#### Solutions for broadcasters, industry and studios

Rohde & Schwarz helped shape the development of the broadcasting landscape where almost all analog transmitter networks have been replaced by digital terrestrial broadcasting. Today, Rohde & Schwarz transmitters and T&M equipment are used for analog and digital television in more than 80 countries.

We offer broadcaster, studio and network operator solutions for production, post production and distribution of audiovisual signals. Our products support all formats and resolutions and cover the entire signal processing chain – from the recording location to the network feed via headends to terrestrial broadcasting.

- ← TV transmitters from Rohde & Schwarz excel through highest energy efficency and reliability. The R&S\*ETH handheld TV analyzer facilitates all necessary on-site quality and service measurements.
- ◆ R&S®THU9 UHF high-power transmitter family features outstanding configuration flexibility and easy operation.





# Cybersecurity

### Security products for businesses, government authorities and critical infrastructures

The rise of digitization and global networking has resulted in a rapid increase in potential threats to businesses, government authorities and critical infrastructures. In the new cybersecurity business field, Rohde & Schwarz and its subsidiaries Rohde & Schwarz SIT, gateprotect, Sirrix and ipoque offer a broad range of technologically leading solutions for IT and network security. The portfolio focuses on crypto solutions, next generation firewalls and endpoint security applications, ranging from small all-in-one products to customized solutions for critical infrastructures.

- Data centers manage the intellectual property of a company and therefore require comprehensive, reliable protection against cyberattacks.
- The R&S\*SITLine ETH family of Ethernet encryptors protects organizations against espionage and the manipulation of data transported over landline, radio relay and satellite links. Up to 40 Gbit/s per device can be achieved.



# Secure communications Our secure communications portfolio: Integrated communications systems for the civil and military ATC as well as for the army, navy and air force

## Secure communications

### Secure communications for armed forces and ATC authorities

The key to success in today's military missions is achieving information superiority through network centric operations. Rohde & Schwarz supplies interoperable radiocommunications systems for deployment on land, at sea and in the air. Our solutions use efficient encryption methods that satisfy the highest national and international security standards. Civil air traffic control agencies in 80 countries count on reliable radio systems from Rohde & Schwarz. The company offers complete, state-of-the-art, IP-based communications solutions, from the controller working position to the antenna.

- ← Rohde & Schwarz systems keep controllers and cockpits in touch at over 200 airports and ATC centers around the world.
- R&S®NAVICS is the most sophisticated integrated communications solution for naval ships. It is completely based on (Vo)IP technology.
- The R&S\*SDTR software defined tactical radio comes with a comprehensive suite of state-of-the-art waveforms for voice and data





# Radiomonitoring and radiolocation Our radiomonitoring and radiolocation portfolio: Radio intelligence systems Radar signal analysis systems Spectrum monitoring systems Satellite monitoring systems Signal analysis systems (also for radar) Receivers, antennas and direction finders Software solutions for network monitoring

# Radiomonitoring and radiolocation

### Frequency management and radiolocation for internal and external security

The demand for mobile, wireless exchange of information is continually increasing, but the usable frequency spectrum for radiocommunication and broadcasting is limited. As a result, it can be expensive when the market determines the price, e.g. in spectrum auctions. That is why it is important that regulatory authorities ensure proper technical and legal use of the spectrum. Network operators also have a vital interest in an errorfree, performance-optimized infrastructure and require technical means to ensure this service.

Rohde & Schwarz provides the necessary equipment. The company's receivers, direction finders, signal analyzers, antennas and customized systems have made Rohde & Schwarz a reliable partner for its customers for decades. Applications include sovereign spectrum management by regulatory authorities and technical monitoring of radio networks by their operators, as well as securing critical infrastructure such as power plants, and electronic intelligence to ensure homeland and external security.

- ← Comprehensive and transportable Rohde & Schwarz COMINT system.
- The R&S\*EB500 monitoring receiver is the perfect blend of form and functionality, featuring a large touchscreen panel with intuitive operational functions that are easy to use.



# Research and development

#### High technology and innovation

At Rohde & Schwarz, we thrive on innovation, which is why more than 10 percent of our annual net revenue goes into research and development at Rohde & Schwarz Asia. To maintain high quality standards, Rohde & Schwarz keeps the entire value chain within the company.

On the one hand, our research and development centre in Singapore works in close collaboration with our central German headquarters in Munich to develop state-of-the-art instruments and solutions. On the other hand, closer proximity to the Asian markets helps us to anticipate the needs of local markets and respond quickly to market trends, and this allows our customers to stay well ahead of the competition.

↓ Lineup of Rohde & Schwarz instruments, including the R&S\*SFU broadcast test system, R&S\*SFE broadcast tester, R&S\*ETL TV analyzer, etc.





# **Production**

#### A global production and supply chain network

Rohde & Schwarz is an industry leader in product quality and value. Each Rohde & Schwarz product must measure up to the company's ODER: Each of our products must measure up to our exacting standards regarding features, performance and operational safety.

Our production plants in Singapore and Malaysia form an integral part of our global production network, and subscribe to the quality standards set by our German counterparts. We consistently manufacture products that meet or exceed industry and customer requirements.

Manufacturing plants in Singapore (left) and Malaysia (right).





- → Each product from Rohde & Schwarz must measure up to strictest quality internally standards.
- ◆ Production line at the manufacturing plant in Malaysia.





# System engineering

### Making complex engineering projects simple for customers

Rohde & Schwarz takes a seamless approach to helping customers stay at the forefront of technology. Our end-to-end solutions are designed to minimize complexity and maximize convenience for our customers with low turnaround time.

Our professional team of system engineers tailors bespoke solutions that meet long-term sustainable business needs through all project phases - from design, development, production and operation to customized after-sales training support.

With over 19 years of experience, the system engineering team in Singapore has an accomplished track record of more than 4,000 projects in over 25 countries.

- → 3 meter semi-anechoic chamber for EMC system research and project studies at Rohde & Schwarz Asia.
- **↓↓** Rohde&Schwarz offers state-of-the-art integration and engineering services.







# Service and customer care

#### Our support centre is always there to help you

Customer care is a key hallmark of the Rohde & Schwarz service strategy, offering customers fast and responsive services with four support centers in different time zones: Munich, Washington, Latin America and Singapore. Support is available 24 hours a day, Monday through Friday, excluding public holidays.

Our service engineering professionals provide customers with a full suite of after-sales service and expertise, including calibration, repair work, upgrades, preventive maintenance and on-site support to meet every customer's needs.

#### Customer Support Asia/Pacific

Phone: +65 6513 0488

Email: customersupport.asia@rohde-schwarz.com

→ Our service centre is ISO 9001 certified and ISO/IEC 17025 accredited by SAC-SINGLAS. We service microwave equipment up to 67 GHz.







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