



ROHDE & SCHWARZ AMERICA TRANSMITTER SERVICES

ROHDE & SCHWARZ

Make ideas real



Identify the level of your support needs

1

No Coverage

24 x 7 access to Rohde & Schwarz Support Center and telephone service hotline for critical issues. Includes access to technical documentation such as manuals, service circulars, and critical software updates. All services (depot repair, onsite and loaner modules) will be quoted at the then-current list price and require a customer to submit a purchase order on Rohde & Schwarz USA, Inc.'s (RSA) Terms and Conditions of Sale before work can commence.

2

Silver Service Level Agreement

24 x 7 access to Rohde & Schwarz Support Center and telephone service hotline. Includes access to technical documentation such as manuals, service circulars, software maintenance updates and coverage for the RSA depot repair services and replacement parts stock. Targeted turnaround time of 5 working days for module repairs. Coverage for module loaners for the duration of your depot repair service. Customer is notified when a new maintenance release of a defined software is available. On site within 72 hours after receipt of PO for critical issues requiring a site visit after all attempts at cooperative support have been exhausted.

3

Gold Service Level Agreement

Includes all the services found in our Silver SLA, but enhances targeted turnaround time to 3 working days for module repairs and on site response time to within 48 hours, without requirement of a PO, for critical issues requiring a site visit after all attempts at cooperative support have been exhausted. The Gold SLA also includes one scheduled Proactive Preventative Maintenance transmitter site visit with PPM report. Details on the PPM visit are explained below.

4

Remote Transmitter Monitoring (RMTX)

Under the RMTX program, the R&S support team will remotely monitor your transmitter 24/7/365 via secure connection. In the case of an alarm, R&S will assess the severity of the alert messages, initiate a response to your team and advise on the best next step to resolve the issue. Replacement parts or loaner modules will be prepared for shipment without PO and in some cases without your request. Details on the RMTX program are explained on the following pages.

Service Components	No Coverage	Silver SLA	Gold SLA
24 x 7 access to R&S support center	Yes	Yes	Yes
Phone Support	Yes	Yes	Yes
Depot Repair Services	No	Yes	Yes
Loaner Pool Access	Quoted	Yes	Yes
Software Updates	Critical	Yes	Yes
Preventative Maintenance (PPM)	Quoted	Quoted	Yes
Remote Transmitter Monitoring (RMTX)	No	Optional	Optional

SERVICE LEVEL AGREEMENT PACKAGE DESCRIPTIONS

No Coverage

This is the basic level of support available after the Service Level Agreements (SLA) that are provided with the purchase of your transmitter expires. Services provided without SLA coverage include 24 x 7 access to our support center, phone support Monday through Friday 8 a.m. – 7 p.m. eastern time and 24 x 7 support for critical transmitter issues. Software updates that are critical to transmitter operation will be provided at no charge.

Transmitter system repairs will be attempted remotely. If remote service is unsuccessful, RSA will, with receipt of a PO, either arrange for the defective part to be returned to our depot for service or dispatch a field engineer at our first availability to perform on-site repairs. Requests for on-site service will be according to availability.

The option of a loaner module for use while your module is being serviced will be quoted upon request and based on availability.

Enhancements to this level are available by upgrading to one of our SLAs. Customers will be notified 6 months prior to the expiration of the SLA provided with the purchase of their transmitter and will be offered the opportunity to extend or upgrade to one of the SLA options described below. When there has been a gap in coverage between expiration and renewal, RSA reserves the right to examine products or systems prior to entering into an SLA. The examination and any repairs are invoiced separately.

Silver SLA

Our Silver SLA is designed for customers who are looking to make their operational expenses more predictable. Silver SLA provides 24 x 7 access to the R&S Support Center with up to 16 business hour response time, software maintenance updates and technical phone support. Full coverage for depot repair, qualified replacement parts and loaner modules which are shipped within two business days via next day service. Under the Silver SLA the targeted turnaround time for module repairs is 5 working days.

Transmitter system repairs will be attempted remotely. If remote service is unsuccessful, RSA will, with receipt of a Purchase Order (PO), dispatch a field engineer to the site within 72 hours.

Silver SLA only covers Rohde & Schwarz products. Third party equipment is not covered.

Gold SLA

Our Gold SLA is designed for customers who are looking for assistance from Rohde & Schwarz in maintaining their transmitter over its lifetime, as well as making their operational expenses more predictable. Gold SLA provides 24 x 7 access to the R&S Support Center with up to 8 business hour response time, software maintenance and technical phone support. Full coverage for qualified replacement parts and loaner modules. Parts or loaner modules requested by 3 PM EST on business days ship same day via next day service. Under the Gold SLA the targeted turnaround time for module repairs is 3 working days.

Transmitter system repairs will be attempted remotely. If remote service is unsuccessful, RSA will dispatch a field engineer to the site without a PO within 48 hours.

Under Gold coverage, an RSA field engineer will make one Proactive Preventative Maintenance (PPM) visit and provide a detailed report of the transmitters performance and any issues found and actions taken by the field engineer. A detailed description of the PPM can be found in the following pages.

Gold SLA only covers Rohde & Schwarz products. Third party equipment is not covered.

Remote Transmitter Monitoring (RMTX)

Our Remote Transmitter Monitoring service is designed for customers who would like to have RSA transmitter engineers securely monitor the performance of your transmitter and be the first to react to alarms requiring action. Through the use of a Secure Application Gateway (SAG), your transmitter will continuously provide our service engineers with the current status of your transmitter's operation, and alert them of all faults whether minor or critical. Our engineers will assess the situation and contact you with instructions on corrective action. Since the transmitter must be under SLA to add the RMTX service, replacement parts or loaner modules can be shipped without action on your part. Through cooperative support, RSA engineers will work with your Rohde & Schwarz trained technician (See Transmitter Operation & Maintenance Training) to replace parts, modules or make changes to the transmitter settings. A detailed description of the RMTX program can be found in the following pages.

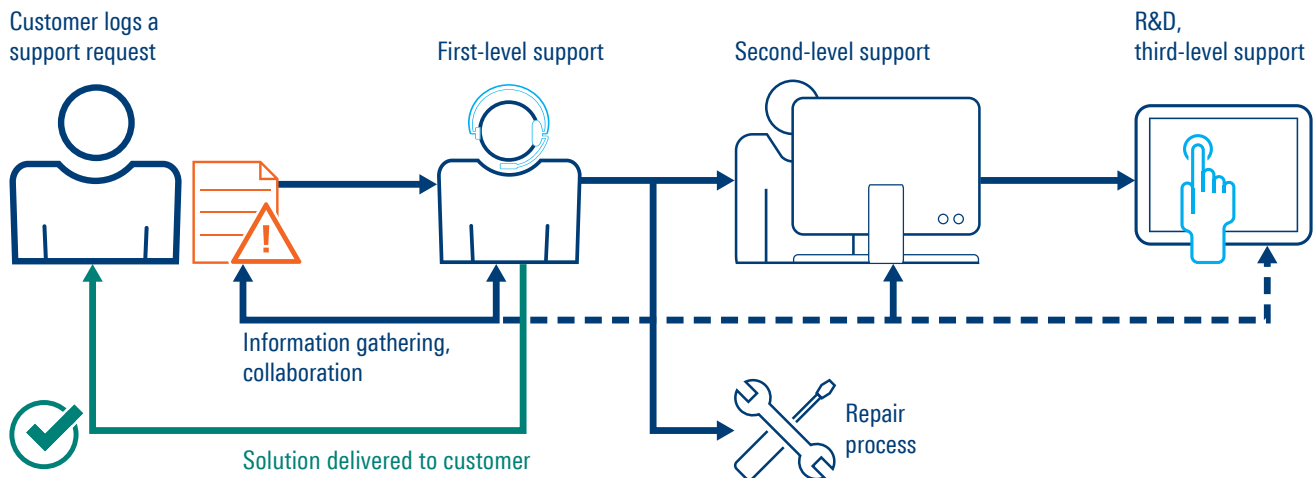
DETAILED SERVICES OVERVIEW

24 x 7 access to the R&S Online Support Center

The Rohde & Schwarz Support Center enables our customers to submit a support request online at any time and from anywhere in the world, via desktop or mobile devices. In addition, it allows a request status to be monitored, additional information to be added as well as communication with the RSA support team. Using the Support Center makes interactions with RSA efficient and transparent for our customers.

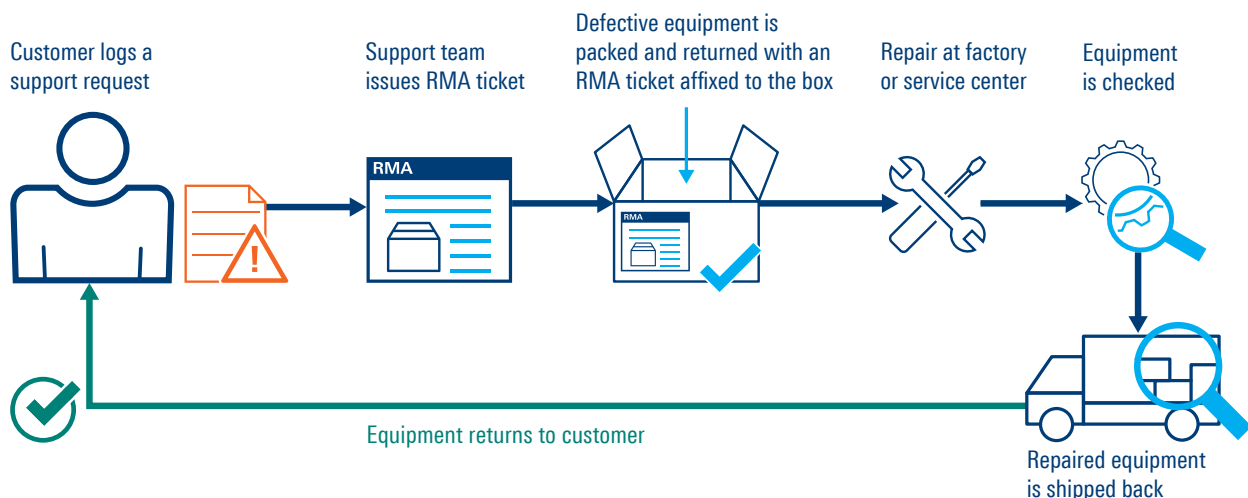
Technical support

Upon receipt of the support request, the R&S support team initiates a resolution process. During this process, R&S qualified experts work jointly with the customer according to the parameters and procedures defined by the SLA.



Repair Coverage

A defective product will be repaired at the RSA repair depot. Rohde & Schwarz bears all expenses associated with the repair activities (labor costs and material).



Software Maintenance Update (Assisted)

Software maintenance updates contain bug fixes and/or minor enhancements to maintain and optimize product performance. The customer is notified when a new maintenance release of a defined software is available and is eligible to access and download it. Software will be made available via a Rohde & Schwarz download center. RSA engineers will support the customer to facilitate installation of software updates, if possible, in combination with remote access.

Initiation of further on-site support

When service activities cannot be performed via cooperative support or as customer self-service, RSA will send a service expert to the customer site or, if applicable, a service expert from a dedicated sub-contractor.

On-site support may include the following (technology/product specific):

- ▶ Hardware inspection and failure detection
- ▶ On-site repair

Within on-site activities, the service expert can be remotely supported by Rohde & Schwarz technical support or sub-contractors, if required. On site activities require mutual agreement between Rohde & Schwarz and the customer.

Transmitter Operation & Maintenance Training

Rohde & Schwarz includes two seats in the Transmitter Operation and Maintenance Training course with the purchase of each transmitter. The two-day course is held several times a month and taught by an RSA transmitter engineer at our U.S. Headquarters in Columbia, MD. Technicians come away with a comprehensive understanding of how to configure, operate and troubleshoot air and liquid-cooled TV transmitters as well as liquid cooled FM and HD-FM transmitters. Customers are responsible for travel and lodging.

Cooperative Support

We believe technicians who have attended the Rohde & Schwarz Transmitter Operation and Maintenance training course will experience the maximum performance and reliability from their transmitter. Cooperative Support is when we assist your on-site technicians by complementing their existing know-how with RSA expertise. Issues diagnosed by RSA service engineers will be solved faster in cooperation with a technician who has been trained, trial-and-error solving can be avoided, and service will be restored faster.

DETAILED SERVICES OVERVIEW

PPM (Proactive Preventative Maintenance)

Even the best engineered equipment can develop problems over time. Routine preventative maintenance helps you avoid hardware and software related issues before they happen, thus a comprehensive maintenance plan is essential for smooth transmitter operations and achieving the highest possible efficiency. RSA's comprehensive Proactive Preventative Maintenance (PPM) program delivers a tailored solution for your maintenance needs. It is designed to help extend the lifecycle of your transmitter and ensures that your investment continues to deliver peak performance. It's a smart, cost-effective strategy that minimizes downtime and maximizes operational efficiencies.

Under the PPM program, you will receive one visit from an RSA field engineer to perform an annual transmitter system inspection to verify everything is in proper working order and a report to document the test. This is similar to a proof of performance without the spectrum analyzer measurements. (A sample PPM report can be provided upon request).

The engineer will also:

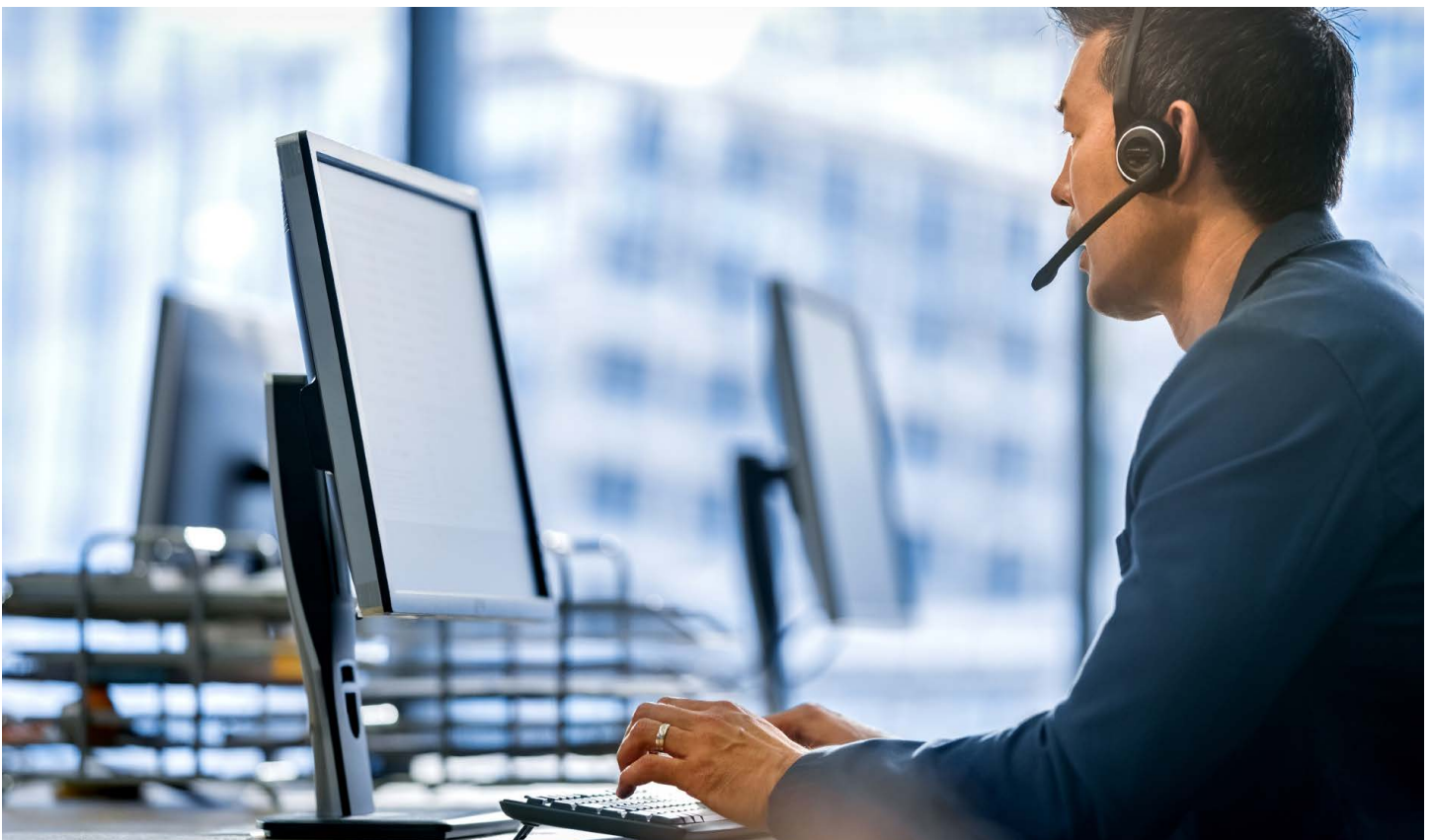
- ▶ Verify the software is up to date.
- ▶ Perform any recommended service circular work.
- ▶ Check coolant and top off if needed.
- ▶ Check the heat exchanger and clean coils if needed.
- ▶ Power calibration and exciter correction is done on both exciters before the PPM test.
- ▶ Optimize the transmitters efficiency.
- ▶ Perform a thermal image scan of the transmitter, interconnecting line and RF system.
- ▶ Create new backup files for the exciters and controller with parameter snapshots, leaving one thumb drive with the station and storing one on our server for emergency restoration.
- ▶ Answer questions and provide training for the station's transmitter engineers with any remaining time.
- ▶ Provide any recommendations for optimal future performance.

RMTX (Remote Transmitter Monitoring)

The RMTX service is an enhancement to the Gold SLA package and is designed for broadcasters having a difficult time finding experienced transmitter engineers to service and maintain their investment. These broadcasters can look to the RSA transmitter service team to securely monitor their transmitters operation and performance 24/7/365, and in case of an issue, the RSA service engineer is alerted and can review the situation. Once analyzed, the service engineer will alert the station of the situation and provide recommended actions to remedy the issue. When necessary, the RSA service department will initiate further actions covered by the SLA, such as:

- ▶ Proactively prepare replacement / loaner parts for shipment without action by the broadcaster
- ▶ Provide remote support on the prescribed corrective action to someone from your staff who ideally has attended our Transmitter Operation and Maintenance Course.
- ▶ If after all attempts at Cooperative Service have been exhausted, dispatch a field service engineer to complete the repair. Any required site visits are covered if the station is under Gold SLA, or billed at our daily rate under Silver SLA.

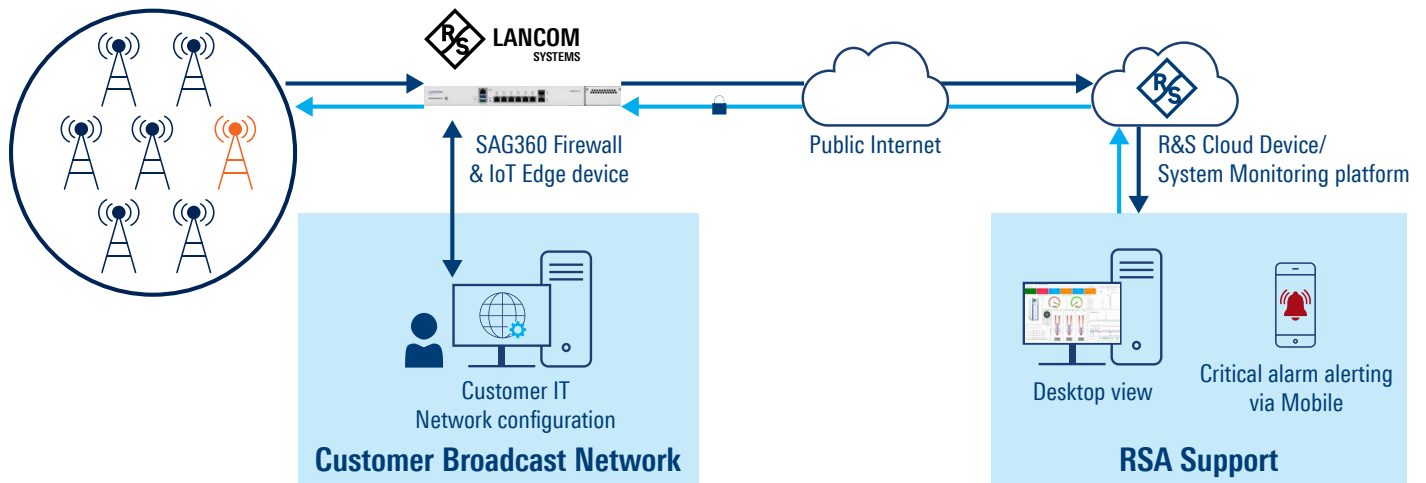
Even when your transmitter is operating as expected, the RMTX program provides periodic performance reports on the data being monitored.



DETAILED SERVICES OVERVIEW

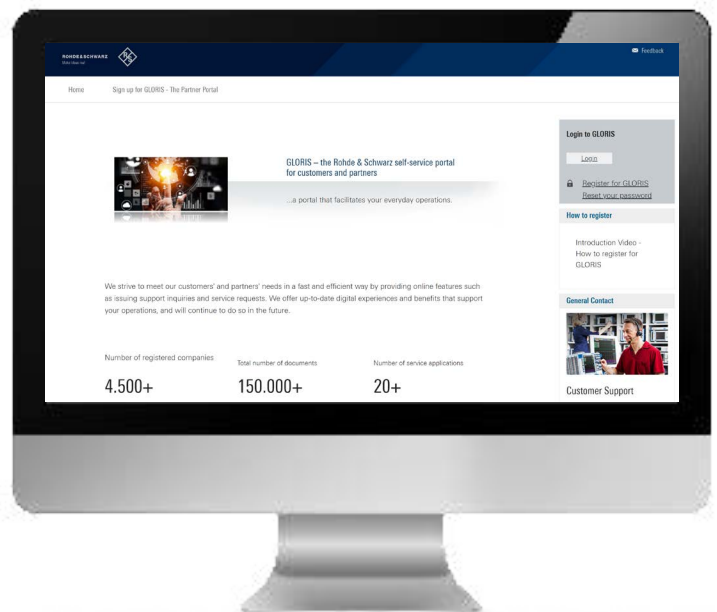
The single point of communication from the transmitter to the Rohde & Schwarz Monitoring Platform is the Rohde & Schwarz Secure Application Gateway SAG360-FW., The SAG360-FW builds the interface and security anchor between a customer network and the Rohde & Schwarz monitoring platform. It comes pre-configured to only allow device sensor data to pass from inside to outside your network and blocks all other traffic to ensure protection against cyberattacks to the highest possible level. All data is stored in the Rohde & Schwarz monitoring platform and only accessible from inside the Rohde & Schwarz corporate network for Rohde & Schwarz employees. The system architecture only allows for communication between known source and drain, blocking external attacks.

RMTX System Diagram



REGISTER ON GLORIS

The Rohde & Schwarz Global Information System (GLORIS) is an extranet we maintain to provide access to documentation such as manuals, parts diagrams, user guides, and service bulletins as well as to enter support tickets directly any time of the day or night. In order to access GLORIS, an account will need to be made, which requires a login with an e-mail address and password. All Rohde & Schwarz customers can register on GLORIS, by going to <https://gloris.rohde-schwarz.com>, clicking 'Register for GLORIS' and requesting access to the tile Broadcast//Media Support. For help registering, please see the instructional video at the following link: <https://gloris.rohde-schwarz.com/anonymous/en/pages/toplevel/glorisreg.html>



Rohde & Schwarz

The Rohde & Schwarz electronics group offers innovative solutions in the following business fields: test and measurement, broadcast and media, secure communications, cybersecurity, radiomonitoring and radiolocation. Founded more than 80 years ago, this independent company has an extensive sales and service network and is present in more than 70 countries.

The electronics group is among the world market leaders in its established business fields. The company is headquartered in Munich, Germany.

For North America service inquiries, they are managed and serviced in our state-of-the-art service facility, located in Columbia, MD or Coppell, TX.

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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

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