

RFEX V6.1.51

Release Notes

Products:

- | R&S®RFEX
- | R&S®RFEX-Fast

This document gives an overview of the additional features and improvements implemented with version 6.1.51

Table of Contents

1	Scope	3
2	Installation / Update	4
2.1	Download of Version V6.1.51	4
2.2	Upgrade to V6.1.51	4
3	New Features in Version 6.1.51.....	5
3.1	Updated Installer	5
3.1	FPL support for spectral measurements	5
4	Improvements.....	6
4.1	Improvements in Version 6.1.51	6
4.2	Improvements in Version 6.1.50	6
4.3	Eliminated Errors Version 6.1.50	6
4.4	Eliminated Errors Version 6.1.42	7
4.5	Eliminated Errors Version 6.1.41	7
4.6	Eliminated Errors Version 6.1.40	9
5	Known Issues	10
5.1	Version 6.1.51	10
6	Improvements Previous Releases	12
6.1	Improvements in Version 6.1.50	12
6.2	Improvements in Version 6.1.42	12
6.3	Improvements in Version 6.1.40	12

1 Scope

This document gives an overview of the additional features and improvements that have been implemented with version 6.1.51:

- Updated Installer
- Support of FPL
- Bugfixes

Furthermore, the release notes provide information on the download link, the update procedure and known issues for the current versions.

2 Installation / Update

2.1 Download of Version V6.1.51

The software can be downloaded from the Rohde & Schwarz web site under the following link:

https://www.rohde-schwarz.com/de/produkt/ts-emf-produkt-startseite_63493-8174.html

The zip-file is password protected. Registered customers get the password via mailing from the R&S customer support center. Please contact customer support or your local sales representative in case you did not receive the mail and need the password.

2.2 Upgrade to V6.1.51

Upgrade to Version 6.1.51 is free of charge.

Installation of RFEX 6.1.50 requires de-installation of the previously used version. Please refer to the quick start and installation guide for further information on the installation.

Important Note: In particular, RFEX 6.1.51 is not compatible with installations prior to 6.1.50. Be sure that versions using the old installer are removed!

3 New Features in Version 6.1.51

3.1 Updated Installer

With RFEX 6.1.50, an installation of RFEX / RFEX-Fast on analyzer was not possible. This limitation has been removed with the updated installer of RFEX 6.1.51. Please refer to the quick start and installation guide for further information on the installation.

3.1 FPL support for spectral measurements

In version 6.1.51, the R&S FPL analyzer is supported. Also installation on the FPL analyzer is possible

4 Improvements

4.1 Improvements in Version 6.1.51

Version 6.50 did not allow for installation on analyzer, because certain files were not compatible with the analyzer operating system. This limitation has been removed.

4.2 Improvements in Version 6.1.50

4.2.1 Extrapolation factor in LTE/UMTS packets

Starting from now, also numbers with decimal fraction can be entered as extrapolation factor.

4.2.2 Sweep time settings for spectral measurements

Instead of using the default "Auto" setting where the analyzer chooses automatically the sweep time, a distinguished sweep time can be set.

4.3 Eliminated Errors Version 6.1.50

4.3.1 FSH4/8 switching between different analyzer modes

In certain situations the switching between analyzer modes (spectrum and digital modulation analyzer) of the FSH4/8 did not work. This has been corrected.

4.3.2 Spectral Measurements with TSME/TSMW

There have been issues while measuring several packets in a spectral measurement with TSME/TSMW. Due to device configuration issues, this caused problems for the TSME/TSMW. To avoid this problem, the number of selectable packets for a spectral measurement for TSME/TSMW has been restricted to one.

4.3.3 3-Axis-Antenna Switching for TSME/TSMW spectral measurements

In certain cases, the antenna switching stopped at the z-axis after the measurement of the first packet. Following packets have been measured only on the z-axis. This has been solved. Anyway, this situation will not appear in future due to the modification of the packet selection for those analyzers (refer to 4.1.2.)

4.3.4 FSH4/8 detection issue

In case an FSH4/8 had previously been selected in the hardware setup and another spectrum analyzer was connected at RFEX startup with the same IP address, a warning message regarding the FSH firmware version has been displayed. This erroneous message will no longer appear.

4.4 Eliminated Errors Version 6.1.42

4.4.1 FSH4/8/13/20 Switching of isotropic antenna through analyzer

In some cases, the selection box "Switching antenna through analyzer" was not displayed. This has been corrected.

4.4.2 Unit in threshold tables wrong

Manually created threshold tables were saved with the wrong unit. This has been corrected.

4.4.3 Error message with RFEX-Fast while report output

Depending on the report output settings of RFEX, an error message occurred while showing reports with RFEX-Fast. This has been corrected.

4.4.4 GPS position from FSH4/8/13/20 not correctly entered in report

The GPS coordinates from FSH4/8/13/20 were only correctly entered in the report, when the GPS sensor unit was tested before in the hardware setup. This has been corrected.

4.5 Eliminated Errors Version 6.1.41

4.5.1 Removal of the Beta-Version mark on the main GUI of RFEX-Fast

For some reason, a Beta-Version label appeared on the main GUI. This has been removed.

4.5.2 Update of the language resource files

The language files for Spanish and Chinese have been updated.

4.5.3 Automatic disabling of active transducers for UMTS measurements with FSH4/8/13/20

If an UMTS measurement is started on FSH, active transducers are automatically disabled.

4.5.4 Correction of position readout for the southern hemisphere with FSH4/8/13/20

The GPS position calculation for FSH was erroneous for the southern hemisphere. This has been corrected.

4.5.5 Recognition errors of hardlock-option TSEMF-K23 (UMTS/LTE decoding with FSH8)

In some cases, option TSEMF-K23 was not recognized correctly for UMTS/LTE decoding with FSH8.

4.5.6 FSH4/8/13/20 problems while switching between different measurement modes

When FSH users with TSEMF-K23 switched between spectral and UMTS decoding or between UMTS and LTE measurements, it could easily happen, that the FSH did not switch the measurement mode or that the data connection got lost. This misbehavior has been removed.

4.5.7 RFEX Option “Switch through Analyzer” for measurements with analyzers of the FSH-family

RFEX Option “Switch through Analyzer” for measurements with analyzers of the FSH-family
Under some conditions the selection box “Switch through Analyzer” on the tab “Switch Unit” of the RFEX Hardware Configuration menu disappeared. This has been corrected.

4.5.8 Support of additional R&S measurement devices

Additional, ZVH4/8, FSW, ESR/ESRP/ESL are now supported.

4.5.9 RFEX-Fast on analyzer: support of GPS receiver

If the RFEX-Fast was installed on an analyzer, activation and usage of a GPS-Receiver were possible, however, the activation and COM address were not stored. This has been changed.

4.5.10 Generation of Packets with frequencies below 30 MHz

For packets with frequencies below 30 MHz, an error message could occur that the cable used does not cover the selected frequency range, even the correct cable was used. This erroneous message does no longer appear.

4.6 Eliminated Errors Version 6.1.40

4.6.1 RFEX crash during startup

On some systems, old ocx and dlls were not overwritten by the components in the latest installation.

4.6.2 Switch through analyzer

The checkbox "Switch through Analyzer" on the tab "Switch Unit" of the RFEX hardware configuration sometime appeared, even if FSH4/8 was selected (reference to known issues below).

4.6.3 Diagnostic routine for antenna switching

A diagnostic routine has been implemented in case if there are problems switching the 3-axis-probe. Thus, the problem can be narrowed down to help the user to solve the problem.

4.6.4 Pre-Amplifier Support for FSL

The pre-amplifier can now be activated in the packet, if FSL is selected as analyzer.

5 Known Issues

5.1 Version 6.1.51

UMTS decoding using spectrum analyzers together with the obsolete Sync Unit TSEMF-SC are not supported at the moment. This does not affect decoding with FSH4/8/13/20 or TSMx devices.

5.1.1 XML reports: LTE measurements

Regarding LTE measurements, currently only PSync and SSync values are listed in the XML report.

5.1.2 XML Reports: Longterm measurements

Currently, no XML reports are generated for longterm measurements.

5.1.3 Calibration File in the Hardware Configuration menu

In the menu Hardware Configuration a calibration file can be used to compensate any frequency response of the measurement device or any additional attenuation. The functionality is the same and in addition to an extension cable called up in the packet settings. While the calibration file is correctly included in the calculation of the final results, it is not considered for the level indication during measurement in the status window and in the bar graph indication during Peak/Average measurement.

5.1.4 Suppress Crosstalk plus 8001 pixels resolution

Restrictions have been found when the Suppress Crosstalk function was used together with 8001 Pixel resolution (RFEX menu *System--> Options*), in particular for small frequency range and small RBW (transmission channel = $\frac{1}{2}$ RBW). In this case, the 8001 pixels setting results in a high number of pixels per broadcast channel, which may lead to wrong results of the suppress crosstalk function.

Recommendation

- Use default setting 501 pixels
- Use 8001 pixel only for wide frequency ranges or together with the peak-search function.

5.1.5 UMTS decoding with FSV

The theoretical maximum measurement rate for Peak/AV is 10 Hz. Due to a timing issue between start of measurement and trigger pulse quite often only 5 Hz may be achieved.

5.1.6 H-field measurements

The RFEX supports H-field measurements and the use of the respective limit lines. However, currently the units in the report have to be changed manually from dB μ V/m to dB μ A/m.

5.1.7 FSH4 / FSH8 antenna switching

For the time being it is not possible to control the switching of an R&S Isotropic Antenna from the RFEX via the Probe Connector of FSH4 / FSH8 (as it is possible for FHS3/6/18). Meanwhile, the functionality has been implemented in the firmware (since V2.0), but it requires activation of a Dummy Transducer on the FSH. An acceptable solution is being sought.

6 Improvements Previous Releases

6.1 Improvements in Version 6.1.50

6.1.1 New Windows installer

New windows installer was introduced.

6.1.1 Support of FPH

The RFEX has been extended to support the R&S FPH handheld analyzer

6.2 Improvements in Version 6.1.42

6.2.1 Decoding with TSME

UMTS and LTE decoding with TSME have been implemented.

6.2.1 Spectral measurements with TSME

Spectral measurements with TSME (RF Power Scan) have been implemented.

6.3 Improvements in Version 6.1.40

6.3.1 Improvement TSMW RF Power Scan

Major improvement of spectral measurements with TSMW (RF Power Scan)

6.3.2 Support for FSH13 / FSH20

FSH13 / FSH20 analyzers can be used for measurements.

About Rohde & Schwarz

Rohde & Schwarz is an independent group of companies specializing in electronics. It is a leading supplier of solutions in the fields of test and measurement, broadcasting, radiomonitoring and radiolocation, as well as secure communications. Established 75 years ago, Rohde & Schwarz has a global presence and a dedicated service network in over 70 countries. Company headquarters are in Munich, Germany.

Environmental commitment

- Energy-efficient products
- Continuous improvement in environmental sustainability
- ISO 14001-certified environmental management system



Regional contact

USA & Canada

USA: 1-888-TEST-RSA (1-888-837-8772)

from outside USA: +1 410 910 7800

CustomerSupport@rohde-schwarz.com

East Asia

+65 65 13 04 88

CustomerSupport@rohde-schwarz.com

Rest of the World

+49 89 4129 123 45

CustomerSupport@rohde-schwarz.com

This application note and the supplied programs may only be used subject to the conditions of use set forth in the download area of the Rohde & Schwarz website.

R&S® is a registered trademark of Rohde & Schwarz GmbH & Co. KG. Trade names are trademarks of the owners.

Rohde & Schwarz GmbH & Co. KG

Mühlendorfstraße 15 | D - 81671 München

Phone + 49 89 4129 - 0 | Fax + 49 89 4129 - 13777

www.rohde-schwarz.com