

R&S®FSMR3000

Release Notes

Firmware Version V1.10

These Release Notes are for following models of the R&S® FSMR3000 Measuring Receiver:

R&S® FSMR3008,	order no. 1345.4004.08
R&S® FSMR3026,	order no. 1345.4004.26
R&S® FSMR3050,	order no. 1345.4004.50

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The software makes use of several valuable open source software packages. For information, see the "Open Source Acknowledgment" provided with the product.

The following abbreviations are used throughout this document: R&S®FSMR3000 is abbreviated as R&S FSMR3000.



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1 Information on the current version and history

1.1 New functions

The following table lists the new functions and indicates the version in which the new function was introduced:

New function of firmware V1.10:

Version	Function
V1.10	Support for Splitter Sensors R&S®NRP-Z27/Z37.
V1.10	Support for R&S FSMR3-K50 - Spurious Measurements.
V1.10	Support for R&S FSMR3-B3 - Audio Input and analysis.
V1.10	Support for Settling Time Measurements in FSMR3-K7 AM/FM/PM modulation analysis.
V1.10	New result window "Phase vs Time" (unit rad) in I/Q Analyzer available.
V1.10	Additional 6 MHz 3dB-Gauss filter available for spectrum analyzer mode. The bandwidth can only be selected by entering the numeric value directly.
V1.10	Additional unit "dBm/Hz (Power)" available in amplitude dialog.
V1.10	Trace colors of active traces are indicated in the trace config dialog.

New function of firmware V1.01 SP1:

Version	Function
V1.01 SP1	Support for CPU board, part number 1206.3974.00.
V1.01 SP1	Support for reference board, part number 1325.2193.13.

New function of firmware V1.01:

Version	Function
V1.01	Support for options: R&S FSMR3-K6 - Pulse measurement application R&S FSMR3-K7 - AM/FM/PM modulation analysis R&S FSMR3-K980 - Health and utilization monitoring service (HUMS)
V1.01	Basic instruments: Last service date, last calibration date, next calibration due date and recommended calibration interval are indicated in the R&S support dialog.

New function of firmware V1.00:

Version	Function
V1.00	Support for: <ul style="list-style-type: none"> ● R&S FSMR3008 ● R&S FSMR3026 ● R&S FSMR3050
V1.00	Support for options: <ul style="list-style-type: none"> R&S FSMR3-B1 - Spectrum Analyzer R&S FSMR3-B4 - OCXO precision frequency reference R&S FSMR3-B8 - Resolution bandwidth up to 80 MHz R&S FSMR3-B8E- Resolution bandwidth up to 40 MHz R&S FSMR3-B10- External generator control R&S FSMR3-B13- Highpass filter for harmonic measurements R&S FSMR3-B18- Spare solid state drive R&S FSMR3-B24- RF preamplifier R&S FSMR3-B60- Phase noise analyzer with cross correlation R&S FSMR3-B65- LO inputs for residual phase noise measurements R&S FSMR3-B80- 80 MHz analysis bandwidth R&S FSMR3-K15- VOR/ILS measurements R&S FSMR3-K30- Noise figure measurements R&S FSMR3-K33- Security write protection for solid state drive. R&S FSMR3-K40- Phase noise measurements R&S FSMR3-K70- Vector signal analysis R&S FSMR3-K70M- Multi-Modulation vector signal analysis R&S FSMR3-K70P- BER PRBS measurements

1.2 Modified functions

The following table lists the modified functions and indicates the version in which the modification was carried out:

Modifications of firmware V1.10:

Version	Function
V1.10	If the preset mode is set to MREC, the default RF input coupling mode is set to DC. Otherwise AC is the default coupling mode.
V1.10	The mini soft frontpanel appears on the right side of the screen now.
V1.10	Colors are used to improve the readability of selftest and self alignments results.
V1.10	The default date format was changed to “YYYY-MM-DD” in the GUI.

Modifications of firmware V1.01 SP1:

Version	Function
V1.01 SP1	Displayed resolution of the carrier offset in the measurement receiver application increased to 0.001 Hz.

1.3 Improvements

The following tables list the improvements and indicate since which version the issue could be observed:

1.4 Known issues

The following tables list the known issues and indicate since which version the issue could be observed:

Known issues of firmware V1.10:

since	Function
1.10	When a splitter sensor R&S®NRP-Z27/Z37 is used, the insertion loss is corrected via a transducer factor. The Phase Noise application (B60) does not support transducer factors to correct the additional attenuation. Lower power levels will be shown.

1.5 Microsoft Windows 10

The R&S FSMR3000 uses the Windows 10 IoT Enterprise LTSB operating system, which is the embedded version of Windows 10 with long term support for Windows patches.

2 Modifications to the documentation

The current documentation is up-to-date.

3 Firmware update

3.1 Validity information

The R&S FSMR3000 installer is valid for:

Device	Order Number
R&S FSMR3008	1345.4004.08
R&S FSMR3026	1345.4004.26
R&S FSMR3050	1345.4004.50

3.2 Update information

The firmware update file for the R&S FSMR3000 is one file including the main firmware version number, e.g. FSMR3000Setup_V1.10.exe. It will be referred to as FSMRSetup.exe later in the text.

3.3 Performing the Firmware Update on the Instrument

There are three ways to make the FSMR3000Setup.exe setup file visible to the device:

Using a memory stick:

1. Copy the file to a directory of the memory stick.
2. Insert the memory stick into one of the USB sockets of the R&S FSMR3000.

Using the remote desktop and copying the installation files to a directory of the instrument:

1. Connect the R&S FMR3000 to your LAN.
2. Start the remote desktop on your PC (C:\winnt\system32\mstsc.exe).
3. Enter the TCP/IP address of the instrument you want to update. The IP address consists of 4 numbers between 0 and 255.
(To get the TCP/IP address of the R&S FSMR3000, press the "Setup" key, then select "Network + Remote".)
4. Ensure that the "local resources" > "drives" option is selected.
5. Press the "Connect" button.
6. Log on to the instrument (user name: "instrument" and default password "894129").
7. Copy the FSMR3000Setup.exe from your PC to a new folder, e.g. C:\FWUpdate.
8. You can now access this directory with the FSMR3000Setup.exe from the R&S FSMR3000 analyzer firmware.

Using a network drive:

1. Connect your R&S FSMR3000 to your LAN and establish a connection to one of your servers. (Ask the local IT administrator for support.)

2. Copy the FSMR3000Setup.exe from your PC to a directory on this server.
3. You can now access the directory with the FSMR3000Setup.exe file from the R&S FSMR3000 analyzer firmware.

Performing the update on the instrument:

Update the firmware by performing the following steps:

1. Switch the instrument on and wait until the analyzer has resumed operation.
2. Press the "SETUP" key, then select "System Config" > "Firmware Update" tab.
3. A file browser is displayed to select the proper FSMR3000*.exe setup file.
4. Change the path to the drive and directory which you prepared in the step before (USB stick directory, remote PC directory or directory on a server).
5. Select "Install" to close the dialog.
6. Select "Next" to display the selection of the firmware packages. By default, all applications are installed. Ensure that the required applications are selected.
7. Select "Install".
8. The firmware is stopped and the installation starts. After a few minutes, the system restarts automatically. After the restart, the firmware installation is complete. After the firmware update, the "UNCAL" flag appears. A self alignment is necessary.
9. Press the "SETUP" key, then select "Alignment" > "Start Self Alignment" to invoke the alignment procedure.

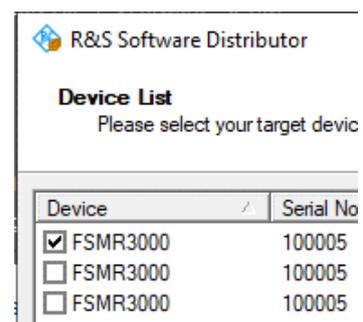
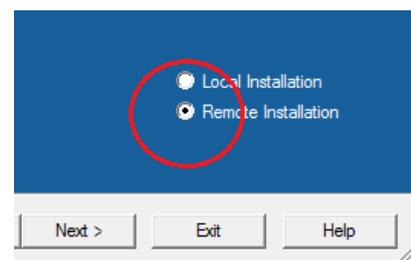
3.4 Performing the Firmware Update from a Windows PC

The R&S FSMR3000 firmware can also be uploaded without using a memory stick or a network drive. Just a LAN connection from the instrument and a Windows PC is necessary.

1. Run FSMR3000Setup.exe on your PC.
2. Select "Remote Installation".
3. Select "Next."
4. Select the packages to install.
5. Select "Next".

Note:

FOR FIREWALL USERS: The FSMR3000Setup.exe communicates with the instruments via LAN. Therefore, the FSMR3000Setup.exe file must pass the firewall. Add it to the firewall rules, then restart the scan using "Rescan".



6. The setup procedure scans your LAN subnet and displays all found instruments
7. Select the instruments you want to update.

NOTICE

Be careful and check twice if you have selected the correct instruments. Depending on your company's network structure, also instruments of other departments are included!

8. Select "Help" to display additional help.
Select "Install" to start the installation.
9. Confirm the message to reboot the instrument to activate the firmware update.
The instrument then restarts automatically.
10. After the restart, the firmware installation is complete and the "UNCAL" flag appears. A self alignment is necessary.
11. Press the "SETUP" key, then select "Alignment" > "Start Self Alignment" to invoke the alignment procedure.

3.5 Installing firmware options

3.5.1 Firmware options within the FSMR3000setup.exe File

The R&S FSMR3-K6, R&S FSMR3-K15, R&S FSMR3-K30, R&S FSMR3-K40, R&S FSMR3-K70 application software packages have their own installation item and are therefore added to the selection list during the firmware update. Ensure that the checkbox is checked if the installation is requested.

NOTICE

The functionality of R&S FSMR3-K70M, R&S FSMR3-K70P are integrated within R&S FSMR3-K70 and are activated by their own key code.

3.5.2 Enabling options by entering option key codes

NOTICE

Skip this section if the option key was entered once.

To activate application software packages, you must enter a license key for validation.

If an XML-file with an option key was sent to you see the install description below.

The license key is in the device certificate or delivered as a part of the software package. The process is performed in the following steps:

1. Open a Remote Desktop Connection to the instrument via ethernet or connect an external monitor and keyboard/mouse]
2. Select "SETUP".
3. Go to the tab "Versions + Options"
4. Press the button "Install Option".
A dialog box is displayed.
5. Enter the option key number using the keypad.
6. Press "ENTER".
After a successful validation the message "Option Key valid" is displayed. If the validation failed, the option software is not installed.
7. Reboot the device.

Installation of options via XML-file

1. Open a Remote Desktop Connection to the instrument via ethernet or connect an external monitor and keyboard/mouse]
2. Select "SETUP".
3. Go to the tab "Versions + Options"
4. Press the button "Install Option by XML".
A file browser is displayed.
5. Select the path to the XML file (e.g. network drive or USB stick)
6. Press "Select".
After a successful validation the message "Option Key valid" is displayed. If the validation failed, the option software is not installed.
6. Reboot the device.

4 Customer support

Technical support – where and when you need it

For quick, expert help with any Rohde & Schwarz product, contact our customer support center. A team of highly qualified engineers provides support and works with you to find a solution to your query on any aspect of the operation, programming or applications of Rohde & Schwarz products.

Contact information

Contact our customer support center at www.rohde-schwarz.com/support or follow this QR code:



Figure 4-1: QR code to the Rohde & Schwarz support page