R&S®NRP-Z51/-Z52/-Z55/-Z56/-Z57/-Z58
Thermal Power Sensors
Release Notes

The following abbreviations are used throughout this document:
R&S®NRP-Z51/-Z52/-Z55/-Z56/-Z57/-Z58 is abbreviated as R&S NRP-Z51/-Z52/-Z55/-Z56/-Z57/-Z58.

ROHDE&SCHWARZ

Test and Measurement

Release Notes

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1 Information on the Current Version and History

1.1 Version 04.26

Released: September 2016

Fixed Issues

- Sensor Selftest also takes the ambient temperature in account
- Triggerlevel for internal triggering is now resetted to default value after sending an `*rst` command.
- Fixed detection of the NRP-Z5xx power sensors when they are connected to an FSH analyzer

1.2 Version 04.25

Released: March 2013

New Functionality

- Support for NRP-Z51 Variant 03
- Lower limit of `SENSe:POWer:AVG:APERture` set to 500µs.
  With the aperture time set to this value and averaging turned off it is possible to set up a buffered measurement with 500 results per second.

Fixed Issues

- The heater tests are skipped if the calibration data set is empty
- If a RF Level is present during sensor self test, the offset voltage is being evaluated and the sensor test fails.
- The sensor now sends always results after an `init:cont on` command. In some cases (**`SYSTem:RUTime`** > 0 and sensor IDLE for a long time) this did not work properly.

1.3 Version 04.22a

Released: September 2010

New Functionality

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Fixed Issues

- The firmware update file “NRPZ51_SensorFW_BL_04_22a.nrp” contains now the Bootloader Version 01.84.
- Bootloader 01.84 fixes the sensor detection problem when attaching a sensor to the R&S CMW

1.4 Version 04.22

Released: June 2010

New Functionality

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Fixed Issues

- The minimum value for **`SENSe:FREQuency`** is now 0.
  In this case the sensor takes the calibration point at the lowest calibration frequency into account.
- No Sensor Reset during Zero Calibration (which caused the “Missing Sensor” at the NRP)
- **`CALibration:DATA`** – the new calibration data (including S-Parameters) is active after transmission to sensor. No sensor Reset is necessary.

1.5 Version 04.20

Released: January 2010

New Functionality

- New commands: **`CALibration:TEST:DEViation?`** and **`CALibration:TEST:REFerence?`** implemented

Fixed Issues

- Default zero values that are measured during calibration are now automatically taken into account.

1.6 Version 04.18

Released: September 2009

New Functionality (since 04.08)

- New parameter Trigger Dropout Time for a stable internal triggering
  `TRIGger:DTIMe`

Fixed Issues

- When setting a frequency out of range of the sensor specification with **`SENSe:FREQuency`** the sensor selects the lower or upper limit of the sensor specification instead of ignoring the setting
- Correct calculation of the result with measurements in buffered mode when **`SENSe:AVERage:STATe OFF`**
- Default Setting of **`SENSe:AVERage:COUNt:AUTO:RESolution`** is changed to 3
- The Auto Averaging using the NORMAL Algorithm is caluclating the correct Filterlength

- Sensors fully supported with the SMA/SMF-K28

2 Firmware Update

2.1 Important Notes

This package contains the firmware for the power sensor R&S® NRP-Z51/-Z52/-Z55/-Z56/-Z57/-Z58. Each firmware update consists of one file: application firmware and boot loader are merged together. This file should be downloaded into the sensors to get the latest functionality. The firmware release 04.26 is suitable for all power sensors R&S® NRP-Z51/-Z52/-Z55/-Z56/-Z57/-Z58 already delivered. The firmware for the R&S®NRP/R&SNRP2 base unit as well as the firmware for other R&S®NRP-Zxx power sensors is available as a separate package.

2.2 Installation Software

Use the Firmware Update program tool from the R&S®NRP toolkit to load the new firmware for the power sensor R&S® NRP-Z51/-Z52/-Z55/-Z56/-Z57/-Z58. The toolkit is supplied on a CD-ROM together with the sensors. It is also available on the internet under https://www.rohde-schwarz.com/software/nrp-toolkit/.

2.3 Hardware and Software Requirements

The system requirements to perform a firmware update are as follows:

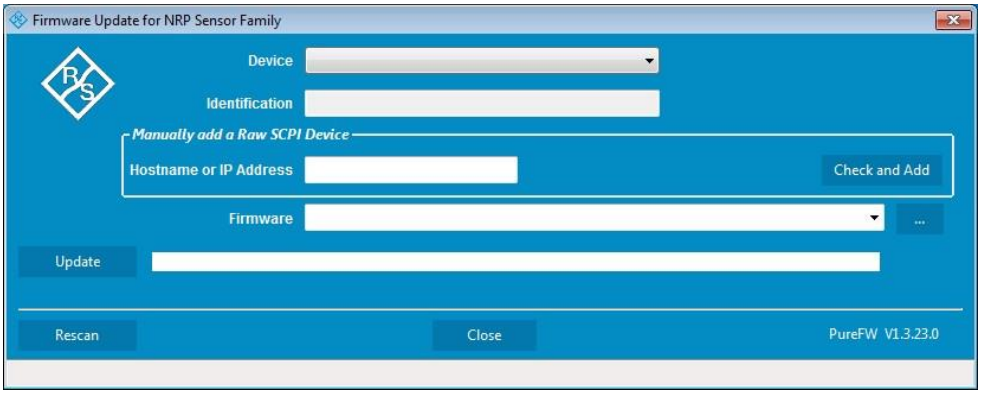
- PC with USB and either NRP-Z3, NRP-Z4 or NRP-Z5
- Operating system Windows™ 7 or Windows™ 8
- The R&S NRP-Toolkit software must be installed on your PC. The Firmware Update is part of the NRP-Toolkit.
- A Rohde & Schwarz update file (*.nrp) for the sensor must be available.

The update files are available in
https://www.rohde-schwarz.com/firmware/nrp-z51var03/

2.4 Updating the Application Firmware

To perform a firmware update:

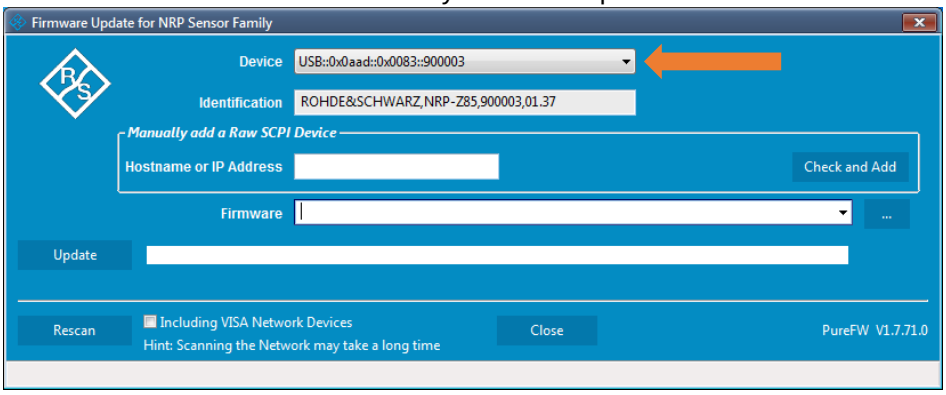
1. Start the Firmware Update program via "Start menu > NRP-Toolkit > Firmware Update". The following window should appear:



The program automatically starts scanning for R&S NRP-Zxx power sensors. When the scan is completed, all recognized power sensors are listed in the "Device" dropdown control.

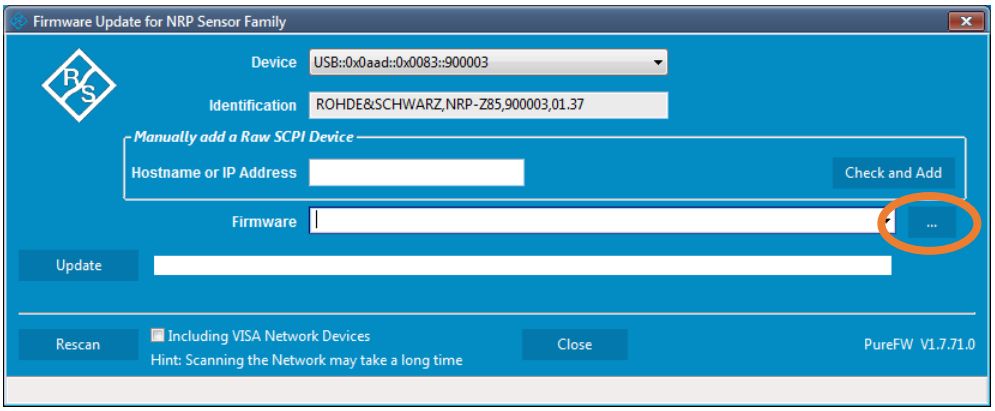
If the sensor you want to update is not listed in the "Device" dropdown control, press "Rescan" to search for attached sensors.

3. In the "Device" line select the sensor you want to update.

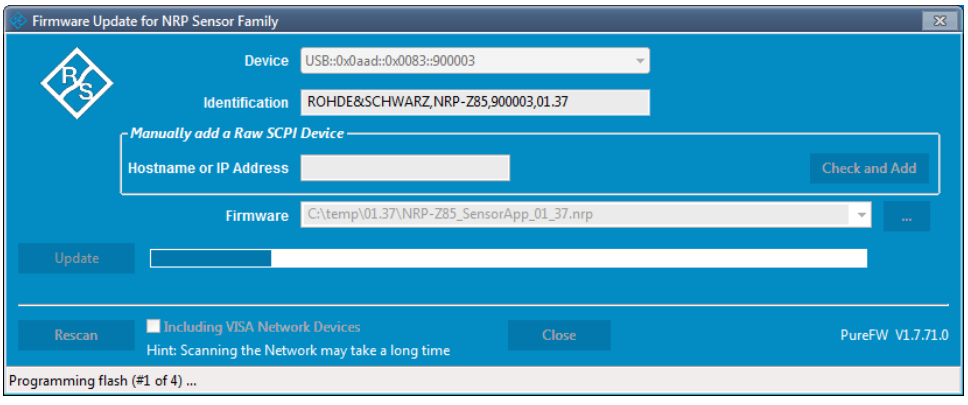


The "Hostname or IP Address" field is not used during this procedure and should therefore be left empty.

4. In the "Firmware" field enter the full path and file name of the update file or press the ellipsis button to browse the file system for it. New firmware for the R&S NRP-Zxx power sensors generally has an *.nrp extension.

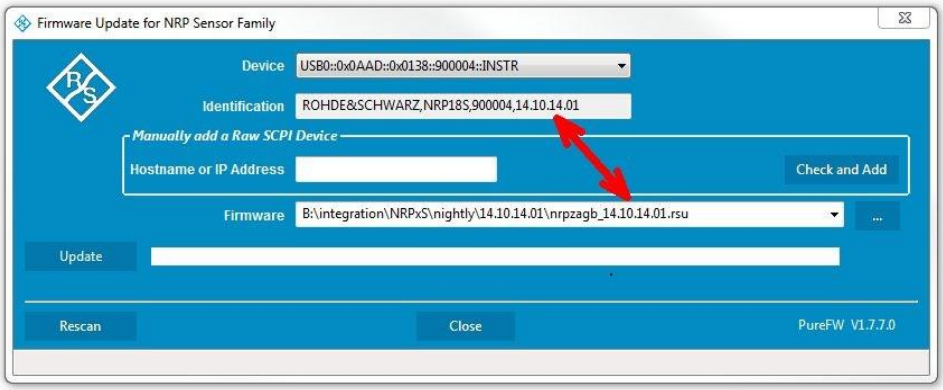


5. Click on the "Update" button to download the new firmware and program it into the flash memory of the sensor.



During the update process the progress is shown through a progress bar. The update sequence may take a couple of minutes, depending on the sensor model and the size of the selected file.

6. Check if the update was successful. This is the case if the firmware version in the "Identification" field is the same as the one you loaded in the "Firmware" field.



Potential damage to the firmware of the device

Disconnecting the power supply while an update is in progress may lead to missing or faulty firmware.Special care must be taken on not disconnecting the power supply while the update is in progress. Interrupting the power supply during the firmware update will most likely lead to an unusable device which needs to be sent in for maintenance.

3 Customer Support

Technical support – where and when you need it

For quick, expert help with any Rohde & Schwarz equipment, contact one of our Customer Support Centers. A team of highly qualified engineers provides telephone support and will work with you to find a solution to your query on any aspect of the operation, programming or applications of Rohde & Schwarz equipment.

Up-to-date information and upgrades

To keep your instrument up-to-date and to be informed about new application notes related to your instrument, please send an e-mail to the Customer Support Center stating your instrument and your wish. We will take care that you will get the right information.

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