

R&S®NRX Power Meter

Release Notes

Firmware Version 02.61.24062801

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1424.7034.00 | Version 11.00 | R&S®NRX Power Meter |

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®NRX Power Meter is abbreviated as R&SNRX Power Meter.

PAD-TM: 3574.3288.02/05.00/CI/1/EN

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1 Information on the current version and history

1.1 Version 02.61.24062801

New functionality

Contents	Reference
None	-

Modified functionality

Contents	Reference
None	-

Improvements

Contents	Reference
Several improvements with hot plugging of sensors: improving overall stability	-

Known issues

Contents	Reference
None	-

1.2 Version 02.60.24032102

New functionality

Contents	Reference
"Sensor Test @ Check Source" functionality now implemented. NRX-B1 is needed for this	-
If connected sensor has active S-parameters, this will be shown in all headlines	-
User now can force the instrument to accept signed update packages only	-
Instrument passwords and security setting may be changed via SCPI commands (USBTMC only)	-
Added SCPI queries for input reflection coefficient: SENSe:IGAMma:MAGNitude? SENSe:IGAMma:PHASe? SENSe:IGAMma:EUNCertainty?	-
NRX now supports the NRPxP droop measurement in pulse analysis	-

Modified functionality

Contents	Reference
None	-

Improvements

Contents	Reference
Several improvements with hot plugging of sensors: improving overall stability	-
Trigger offset can now be set correctly even with big offset settings	-
Sending SCPI command ABORT during INIT:CONT ON will no longer stop the measurement	-
SENSe:NAME? now working correctly	-
changing network settings via USBTMC connection will no longer run into a SCPI timeout	-
Firmware update for connected sensors now working correctly via NRX	-

Known issues

Contents	Reference
In rare cases, there still might be stability issues with connected sensors.	

1.3 Version 02.51.22030701

New functionality

Contents	Reference
None	-

Modified functionality

Contents	Reference
NRX-K301: Changed behavior of following SCPI commands in remote emulation mode SENSe:CORRection:CSET1:SElect SENSe:CORRection:CSET1:STATe	-
If you use them as a command, then no errors are reported. Default values are returned as responses for queries (SElect returns "", STATe returns 0).	

Improvements

Contents	Reference
None	-

Known issues

Contents	Reference
Favorite button is without function	-
Support for network sensors: requires sensor firmware version 02.00 or better	-
Statistics: wrong results when scaling power axis below 0.1 dB/div	-
Remote control: USBTMC connection can freeze - please reconnect USB-cable or reboot NRX	-

1.4 Version 02.50.21112602

New functionality

Contents	Reference
Added new command for trigger synchronization among multiple sensors: TRIGger:SENDER	-
FW update of the sensors via the SCPI remote control interface: SENSE:SYSTEM:FWUPDATE SENSE:SYSTEM:FWUPDATE:STATUS?	-

Modified functionality

Contents	Reference
None	-

Improvements

Contents	Reference
Display: Fixed the loss of touch events when pressing the touch display too fast	-
Remote control: Fixed sporadic loss of GPIB connection	-
Remote control: Fixed SCPI remote control connection stalling when another sensor was plugged in	-
Fixed several problems when booting NRX with 4 sensors: <ul style="list-style-type: none"> Notification message "Maximum number of sensors configured" even though the option NRX-K4 is installed Inability to detect/use one or more sensors even though the option NRX-K4 is installed	-
Fixed a problem when reconfiguring sensors if more sensors are plugged in than the option NRX-K2/-K4 allows	-

Known issues

Contents	Reference
Favorite button is without function	-
Support for network sensors: requires sensor firmware version 02.00 or better	-
Statistics: wrong results when scaling power axis below 0.1 dB/div	-
Remote control: USBTMC connection can freeze - please reconnect USB-cable or reboot NRX	-

1.5 Version 02.40.20100501

New functionality

Contents	Reference
Remote control: Option NRX-K301 Keysight Remote Emulation:	
<ul style="list-style-type: none"> • N432A • E4418B/E4419B • N1911A/N1912A 	-
Security: Change instrument password	-
Security: Set User Interface operation restrictions	-

Modified functionality

Contents	Reference
None	-

Improvements

Contents	Reference
Remote control: Fixed blocked SCPI communication when changing network configuration via GPIB	-

Known issues

Contents	Reference
Favorite button is without function	-
Support for network sensors: requires sensor firmware version 02.00 or better	-
Statistics: wrong results when scaling power axis below 0.1 dB/div	-
Remote control: USBTMC connection can freeze - please reconnect USB-cable or reboot NRX	-

1.6 Version 02.32.20062902

New functionality

Contents	Reference
None	-

Modified functionality

Contents	Reference
None	-

Improvements

Contents	Reference
Remote control: INIT:CONT? query returns "1" only if a continuous measurement is active	-
Security: Disabling "SCPI over LAN" disables all supported protocols (VXI-11, HiSLIP, Socket)	-
NRT measurement: improved trigger event handling when TRIGger:SOURce is set to EXTERNAL	-

Known issues

Contents	Reference
Favorite button is without function	-
Emulation: other emulations not implemented yet (HP, Agilent)	-
Support for network sensors: requires sensor firmware version 02.00 or better	-
Statistics: wrong results when scaling power axis below 0.1 dB/div	-
Remote control: USBTMC connection can freeze - please reconnect USB-cable or reboot NRX	-
Remote control: changing network configuration via GPIB may block SCPI communication – please configure network settings in GUI	-

1.7 Version 02.31.20040101

New functionality

Contents	Reference
None	-

Modified functionality

Contents	Reference
None	-

Improvements

Contents	Reference
Support for R&S Recal+	-
Pulse Analysis: Bugfix display of reference levels related to voltage/power	-
Trigger: Bugfix behavior of *TRG and TRIG:IMM	-
NRP2 remote emulation: TRIG:MODE is set to NORMAL after L/R transition or reset	-

Known issues

Contents	Reference
Favorite button is without function	-
Emulation: other emulations not implemented yet (HP, Agilent)	-
Support for network sensors: requires sensor firmware version 02.00 or better	-
Statistics: wrong results when scaling power axis below 0.1 dB/div	-
Remote control: USBTMC connection can freeze - please reconnect USB-cable or reboot NRX	-

1.8 Version 02.30.19101601

New functionality

Contents	Reference
Support for R&S Recal+	-
Buffered Mode for Continuous Average Measurement	-
Predefined settings for common standards	-
Sanitization/Declassification	-
Download of user manual to USB stick	-
Added SENSE commands: SENSE[:POWER]:BURSt:LENGth? SENSE[:POWER][:AVG]:FAST	-

Modified functionality

Contents	Reference
Sensor power parameter: default unit depends on SENSE:UNIT:POWER parameter setting SENSE:POWER:REFerence SENSE:POWER:CCDF:REFerence SENSE:TRACe:MEASurement:POWER:*	-
Source power parameter: default unit depends on SOURCE:POWER:UNIT parameter setting SOURCE:POWER	-
SYSTEM:PRESet is different from *RST: INIT:CONT ON CALCulate:AVERage:TCONtrol MOVing CALCulate:TRACe:AVERage:TCONtrol MOVing SENSE:AVERage:TCONtrol MOVing SENSE:TRACe:AVERage:TCONtrol MOVing	-

Improvements

Contents	Reference
Network sensor assignment is persistent.	-
Timeslot/Timegate: analog output can be assigned to any slot/gate.	-

Analog output can handle calculated measurement results from two sensors.	-
Remote control: SENSE:POWer:RANGe commands (NRT bargraph) work as expected.	-
NRP2-Emulation: Bugfixes	-
Fixed "TCP SACK Panic" (CVE-2019-11477, CVE-2019-11478, CVE-2019-11479)	-

Known issues

Contents	Reference
Favorite button is without function	-
Emulation: other emulations not implemented yet (HP, Agilent)	-
Support for network sensors: requires sensor firmware version 02.00 or better	-
Statistics: wrong results when scaling power axis below 0.1 dB/div	-
Remote control: USBTMC connection can freeze - please reconnect USB-cable or reboot NRX	-

1.9 Version 02.20.19042601

New functionality

Contents	Reference
None	-

Modified functionality

Contents	Reference
Power parameter: default unit depends on UNIT:POWer parameter setting	
CALCulate:LIMit:LOWer:POWer	
CALCulate:LIMit:UPPer:POWer	
CALCulate:MEter:LOWer:POWer	
CALCulate:MEter:UPPer:POWer	-
CALCulate:NRT:CCDF:THReshold	
CALCulate:RELative:POWer	
CALCulate:TRACe:MEASurement:POWer:*	
OUTPut:REcorder:LIMit:LOWer:POWer	

OUTPut:RECOder:LIMit:UPPer:POWer
 SENSE:POWer:REFerence
 SENSE:POWer:CCDF:REFerence
 SENSE:TRACe:MEASurement:POWer:*
 SOURce:POWer
 TRIGger:LEVel
 TRIGger:ALL:LEVel

Ratio parameter: default unit depends on UNIT:POWer:RATio parameter setting
 CALCulate:LIMit:LOWer:RATio
 CALCulate:LIMit:UPPer:RATio
 CALCulate:METer:LOWer:RATio
 CALCulate:METer:UPPer:RATio
 CALCulate:RELative:RATio
 OUTPut:RECOder:LIMit:LOWer:RATio
 OUTPut:RECOder:LIMit:UPPer:RATio

Improvements

Contents	Reference
Emulation: complete NRP2 emulation	-
Support for network sensors: if sensor is not compatible to NRX then an error message is shown - when sensor is removed the error message is still displayed, but can be deleted manually	-
Trace: horizontal auto scale (only when using NRQ)	-
Trace: marker results are now displayed in result panel	-
Timeslot/Timegate: results are now displayed in result panel in graphical view	-
Remote control: calculated results from two sensors (i.e. DIFF, SUM, ...) can be fetched	-
Remote control: STAT:QUES completely implemented	-
Show EULA for used fonts	-

Known issues

Contents	Reference
Favorite button is without function	-
Emulation: other emulations not implemented yet (NRP, HP, Agilent)	-
Network sensor assignment is not saved - assignment must be repeated after reboot.	-
Support for network sensors: requires sensor firmware version 02.00 or better	-
No predefined settings for common standards	-

Timeslot/Timegate: analog output does only handle the first slot/gate	-
Statistics: wrong results when scaling power axis below 0.1 dB/div	-
Analog output does handle only single measurement results from a single sensor	-
Remote control: USBTMC connection can freeze - please reconnect USB-cable or reboot NRX	-
Remote control: SENSE:POWer:RANGe commands (NRT bargraph) without function	-

1.10 Version 02.10.18121802

New functionality

Contents	Reference
NRP2 emulation	-
Support for network sensors (NRPxxYN and NRQ)	-

Modified functionality

Contents	Reference
None	-

Improvements

Contents	Reference
Offset: GUI offset value is always the effective offset (offset value + frequency dependent offset)	-
Trigger level: limits are updated when offset is to be configured	-
Trace: fixed wrong behavior in trigger mode "Normal" after reconnecting sensor	-
Filter: video bandwidth can be configured for NRP sensors	-
Security settings: webserver / VNC can be disabled	-
Security settings: request for reboot is shown when switching volatile mode	-
Remote control: fixed sporadic deadlocks after remote-local transition / reset	-
Remote control: SCPI errors shown in notification center can be removed	-

Known issues

Contents	Reference
Favorite button is without function	-
Emulation: NRP2 emulation only (most SENSE and CALCulate parameters are implemented, some DISPLAY, MEMORY and OUTPUT parameters not implemented yet)	-
Emulation: other emulations not implemented yet (NRP, HP, Agilent)	-
Network sensor assignment is not saved - assignment must be repeated after reboot.	-
Support for network sensors: requires sensor firmware version 02.00 or better	-
Support for network sensors: if sensor is not compatible to NRX then an error message is shown - when sensor is removed the error message is still displayed until reboot of NRX	-
No predefined settings for common standards	-
Trace: horizontal auto scale not implemented yet	-
Trace: marker results are not shown in result panel	-
Timeslot/Timegate: results are not shown in result panel in graphical view	-
Timeslot/Timegate: analog output does only handle the first slot/gate	-
Statistics: wrong results when scaling power axis below 0.1 dB/div	-
Analog output does handle only single measurement results from a single sensor	-
Remote control: USBTMC connection can freeze - please reconnect USB-cable or reboot NRX	-
Remote control: calculated results from two sensors (i.e. DIFF, SUM, ...) cannot be fetched	-
Remote control: STAT:QUES not implemented yet	-
Remote control: SENSE:POWER:RANGE commands (NRT bargraph) without function	-
EULA for used fonts is missing	-

1.11 Version 02.00.18101801

New functionality

Contents	Reference
First release	-

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Modified functionality

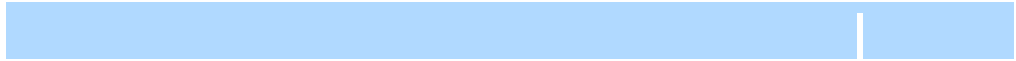
Contents	Reference
None	-

Improvements

Contents	Reference
None	-

Known issues

Contents	Reference
Favorite button is without function	-
No remote emulations	-
No predefined settings for common standards	-
LAN sensors cannot be configured	-
Security settings: Webserver / VNC cannot be disabled	-
Trace: horizontal auto scale not implemented yet	-
Trace: marker results are not shown in result panel	-
Timeslot/Timegate: results are not shown in result panel in graphical view	-
Timeslot/Timegate: analog output does only handle the first slot/gate	-
Analog output does handle only single measurement results from a single sensor	-
Remote control: calculated results from two sensors (i.e. DIFF, SUM, ...) cannot be fetched	-
Remote control: STAT:QUES not implemented yet	-
Remote control: SENSE:POWer:RANGe commands (NRT bargraph) without function	-
Trigger level: Limits are not updated when offset is to be configured	-
EULA for used fonts is missing	-



2 Modifications to the documentation

The current documentation is up-to-date.

3 Firmware update

3.1 Update information

Please refer to the document "R&S®NRX Power Meter User Manual" (<https://www.rohde-schwarz.com/manual/nrx/>).

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