R&S®NRX Power Meter
Release Notes

Firmware Version 02.60.24032102

ROHDE&SCHWARZ

Make ideas real

Contents

1 Information on the current version and history

1.1 Version 02.60.24032102

Released: April 2024

New functionality

Functions
"Sensor @ 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

Functions
n.a.

Improvements

Improvements
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

Known Issues
In rare cases, there still might be stability issues with connected sensors.

1.2 Version 02.51.22030701

Released: March 2022

New functionality

Functions
n.a.

Modified functionality

Functions
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

Improvements
n.a.

Known issues

Known Issues
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

1.3 Version 02.50.21112602

Released: December 2021

New functionality

Functions
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

Functions
n.a.

Improvements

Improvements
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: • 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

Known Issues
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 02.40.20100501

Released: October 2020

New functionality

Functions
Remote control: Option NRX-K301 Keysight Remote Emulation: • N432A • E4418B/E4419B • N1911A/N1912A
Security: Change instrument password
Security: Set User Interface operation restrictions

Modified functionality

Functions
n.a.

Improvements

Improvements
Remote control: Fixed blocked SCPI communication when changing network configuration via GPIB

Known issues

Known Issues
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 02.32.20062902

Released: July 2020

New functionality

Functions
n.a.

Modified functionality

Functions
n.a.

Improvements

Improvements
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

Known Issues
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

1.6 Version 02.31.20040101

Released: April 2020

New functionality

Functions
n.a.

Modified functionality

Functions
n.a.

Improvements

Improvements
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

Known Issues
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

1.7   Version 02.30.19101601

Released: November 2019

New functionality

Functions
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

Functions
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

Improvements
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

Known Issues
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 02.20.19042601

Released: May 2019

New functionality

Functions
n.a.

Modified functionality

Functions
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:RECorder: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:RECorder:LIMit:LOWer:RATio
OUTPut:RECorder:LIMit:UPPer:RATio

Improvements

Improvements
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

Known Issues
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

1.9   Version 02.10.18121802

Released: December 2018

New functionality

Functions
NRP2 emulation
Support for network sensors (NRPxxYN and NRQ)

Modified functionality

Functions
n.a.

Improvements

Improvements
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

Known Issues
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

1.10   Version 02.00.18101801

Released: October 2018

New functionality

Functions
First release

Modified functionality

Functions
n.a.

Improvements

Improvements
n.a.

Known issues

Known Issues
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