

R&S®SGT100A

RF Source Base Unit

Release Notes

FW Version 4.90.108.37

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The firmware of the instrument makes use of several valuable open source software packages. For information, see the "Open Source Acknowledgement" document, which is available for download from the R&S SGT product page at <http://www.rohde-schwarz.com/product/SGT100A> > "Downloads" > "Firmware".

The following abbreviations are used throughout this document: R&S® SGT100A is abbreviated as R&S SGT100A.

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1 Information on the Current Version and History

1.1 Version 4.90.108.37

Released : August 2022

New / Changed Functionality

- SGT-K297 (IRNSS)
- SGT-K423 (Modernized Glonass)
- SGT-K432 (Modernized Beidou)
- SGT-K447 (802.11be)
- SGT-K448 (5G NR Release 16).
- SGT-K470 (5G NR Sidelink)
- SGT-K471 (5G NR Release 17)
- 5GNR: General: Release 15 option has been renamed for harmonization.
- Support of the R&S Equipment Configuration Viewer
- Manually add LAN and USBTMC power sensors
- Do not switch off Power Viewer on READ? command.

Fixed Issues

:CLOCK:SYNC[:STATe] missing	682344
First call to READ? returns a peak value of -199dBm.	824251
Power Servoing for pulsed signals not possible.	827888

1.2 Version 4.70.012.020

Released : January 2021

Fixed Issues

Option SGT-K444 cannot be activated	788446
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1.3 Version 4.70.012.019

Released : October 2020

New / Changed Functionality

- K431 LoRa
- SGT-K298 modernized GPS
- EUTRA/LTE: General: First version to support option K446 (Cellular IoT R15).
- Crest factor reduction on arbitrary waveform files with new option K548.
- SMW-B9/B13XT: DigIQ Advanced-Mode Samplerate 250MHz
- Power Servoing with NRQ6
- Factory Recovery
- Reduced time for internal baseband adjustment
- Removed SYSTem:HELP:EXPort
- Rssgtpy. A Python wrapper for the rssgt instrument driver
- Raised max. number of license keys (K200) from 50 to 500

Fixed Issues

Internal adjustment fails after sanitizing	535237
Internal adjustments change ref source to INT	743235
IQ:IMPairment:SWAP? always returns 0	704394
Unreachable via LAN if connected to certain HP switches	423386

1.4 Version 4.30.046.221

Released : April 2019

New Functionality

- K414 OFDM Signal Generation
- K443 IoT Enhancements
- K444 5G NR
- LAN LED now indicates an active network connection
- Max. Baseband Input sample rate increased to 250 MHz
- Volatile Mode
- Increased setting range for the crest factor
- Windows XP no longer supported for SGMA-GUI

Fixed Issues

After viClear remote connection via USB not working	380954
Marker to signal alignment error up to 1us for waveform sample rates higher than 160 MHz.	355597
Support for creation of very large waveforms	238966

1.5 Version 3.50.124.69

Released : May 2017

New Functionality

- K415 Cellular IOT
- K416 DVB-S2 / DVB-S2X
- K417 Bluetooth 5.0
- K418 V5G
- K419 LTE Release 13/14
- K442 WLAN 8.02.11ax

Fixed Issues

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Known Issues

SGMA-GUI < 3.50 shows a large number of carriers in the multicarrier table. Update to latest version!	
Multicarrier progress value stays at 1% in some cases.	236849

1.6 Version 3.50.124.67

Released : January 2017

New Functionality

- Support for RF board RFMB2
- K308 Direction Finding
- K407 Beidou 1 Satellite
- K412 LTE Release 11 and Enhanced Features
- K413 LTE Release 12
- KV options
- Frequency offset

- Power sensor support
- Added folder /var/volatile for temporary waveforms

Fixed Issues

Asynchronous mode not yet supported with FastSocket	16139
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Known Issues

SGMA-GUI < 3.50 shows a large number of carriers in the multicarrier table. Update to latest version.	
Multicarrier progress value stays at 1% in some cases.	236849

1.7 Version 3.20.347.31

Released : March 2016

New Functionality

- SGT-B88

Fixed Issues

Predistortion test Absolute Power fails due to a PEP error	166903
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Known Issues

Asynchronous mode not yet supported with FastSocket	16139
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1.8 Version 3.20.347.26

Released : November 2015

New Functionality

- SGT-K350
- FastSocket remote control
- Emulation for SMATE

Fixed Issues

Spurious system PLL unlock after repeated configuration change	15193
No progress bar when loading waveforms	15297
PCIe fast command issues	15535
Multi segment waveform with different sample rates not supported	13419
I/Q Delay can only be set up to 6.6 us	15420

Known Issues

Asynchronous mode not yet supported with FastSocket	16139
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1.9 Version 3.20.261.31

Released : June 2015

New Functionality

- SGT-K16 (Analog I/Q outputs)
- Envelope tracking (SGT-K540 option)
- AM/AM, AM/φM predistortion (SGT-K541 option)
- Envelope ARB (SGT-K543 option)
- ARB bandwidth extension to 240 MHz RF Bandwidth SGT-K523
- I/Q modulation below 80 MHz
- ROsc:ADJust:VALue is now a relative value
- Next segment index is now a fast PCIe parameter
- Added RF level offset
- SGT-K200

Fixed Issues

"Hardware SW-option missing ..." when opening block diagram and K18 not installed	15196,15224
Scanning from host with more than one network adapter	13301
Support for NI-Visa version 14.xx	14254
Added K283	15008
Copying files from /var/user folder is now possible	14009

Known Issues

Multi segment waveform with different sample rates not supported	13419
Spurious system PLL unlock after repeated configuration change	15193
No progress bar when loading waveforms	15297

1.10 Version 3.18.251.116.5

Released : March 2015

New Functionality

- SGT-K300 PULSE SEQUENCING
- SGT-K301 ENHANCED PULSE SEQUENCING
- SGT-K412 LTE R11 +ENH

Fixed Issues

SMW Interoperability improved	14318
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1.11 Version 3.18.251.116

Released : December 2014

Fixed Issues

CAL:ALL:MEAS? won't return when monitoring with SGMA-GUI	12006
Clock synchronization issues	13970
"Hardware missing ..." on device startup	13925

1.12 Version 3.18.251.37

Released : May 2014

New Functionality

- Level dialogue has been extended with the function User Correction

Known Issues

CAL:ALL:MEAS? won't return when monitoring with SGMA-GUI	12006
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1.13 Version 3.18.251.15

Released: May 2014

Initial Release

2 Firmware Update

2.1 Update Information

The update procedure requires that the instrument is operational. There is no need to uninstall the current firmware. Instrument settings are preserved during the update, including user data and network settings.

NOTICE

If an update to new versions is required for both the R&S SGMA-GUI and the instrument firmware, it is mandatory that the new instrument firmware is installed prior to updating of the R&S SGMA-GUI to the new version.

2.2 Installing new instrument firmware

1. Select "SGMA-GUI main panel > Instrument Name > Setup > Maintenance > Operation > Install firmware package".
2. Press "Select Package" and navigate to the directory the new firmware is stored in.
3. Enter the "Security Password". The default password is "123456".
4. Confirm the update with "Accept".

The software transfers the firmware file and automatically starts the update procedure. During the update, the message "Updating Firmware" is displayed in the Info line.

NOTICE

This R&S SGT100A is designed to operate at local workplaces or in secured networks (LAN). It should not be accessible from the internet, because this is a potential security risk. As an example, attackers could misuse or damage your device. Please always install the latest firmware and always use secure remote connections if possible. It is highly recommended that you work closely with your IT department or system administrator to ensure compliance with your company policies when connecting devices to your company's network.

2.3 Installing new SGMA-GUI software

2.3.1 Windows

Supported operating systems:

- Windows 10, 1607 "Anniversary Edition" and later

Installation:

- Uninstall any previous version of SGMA-GUI before installing the new software.
- In Windows Explorer double-click **SGMA-GUI_XXXXX.exe** and follow instructions.

2.3.2 Linux (RPM-based, Intel x86_64)

This has been tested on CentOS 7.8.2003. Previous versions of CentOS 7 are expected to work. Newer versions of CentOS, i.e. 8 and newer, as well as other RPM based distributions like SUSE might work.

- Download rs-sigma-gui-xxxx.el7.x86_64.rpm to your computer.
- Run `sudo yum install ./rs-sigma-gui-xxxx.el7.x86_64.rpm`
- Start the application via graphical start menu or via command line as `/opt/rohde-schwarz/sigma-gui/sigma-gui`

Visa

There is no copy of R&S VISA included in this package. You have following options:

- Download & install R&S VISA 5.12.3 or newer. R&S SGMA-GUI is properly configured to utilize this VISA library if present.

- Download & install 3rd party VISA implementation and enter the library filename as key Visa within the section [StartupProcess/OS_LINUX] of /opt/rohde-schwarz/sgma-gui/opt/data/rc/00-default.ini.

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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