R&S®SGS100A
RF Source
Release Notes
Firmware Version 4.30.046.295

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 SGS product page at http://www.rohde-schwarz.com/product/SGS100A > "Downloads" > "Firmware".

The following abbreviations are used throughout this document: R&S® SGS100A is abbreviated as R&S SGS100A.

ROHDE&SCHWARZ

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1 Information on the Current Version and History

1.1 Version 4.30.046.295

Released: January 2020

Fixed Issues

Sporadic additional setting time on instruments with RF board 1419.5308.02	656466

1.2 Version 4.30.046.195

Released: March 2019

New Functionality

- Added instrument driver functions rssgs_getAttribute / rssgs_setAttribute
- Attenuator switching counters
- Improved behavior of LAN LED and button on front panel (s. manual)
- Improved robustness of SGS/SGU connection test
- Increased setting range for the crest factor
- New remote control commands :TEST:EXTension:CONNection and :TEST:EXTension:CONNection:RF
- Windows XP no longer supported for SGMA-GUI

Fixed Issues

Bad carrier suppression	456681
Compiler errors when using -Werror and -Wall	481797
Connection test SGS/SGU fails every other time for SGUs connected via USB	280574
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PLL unlocked error message when using external LO	421791
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Unselect/reselect of SGU extension pair required in SGMA-GUI	479992

1.3 Version 3.50.124.81

Released: September 2018

Fixed Issues

Random time added (330ms) in FastSync	476514

Known Issues

SGMA-GUI may have difficulties updating to this version if a RS-Visa LAN connection is used. Use a Socket or HiSLIP connection instead if the update fails.	360617

1.4 Version 3.50.124.73

Released: October 2017

Fixed Issues

Issues when prematurely closing remote control interface	351080

Known Issues

SGMA-GUI may have difficulties updating to this version if a RS-Visa LAN connection is used. Use a Socket or HiSLIP connection instead if the update fails.	360617

1.5 Version 3.50.124.71

Released: September 2017

New Functionality

- Support for revision 4.00 of RF board RFMB2

1.6   Version 3.50.124.67

Released: January 2017

New Functionality

- Support for RF board RFMB2 (13 MHz reference frequency)
- Power sensor support
- Frequency offset

Fixed Issues

Connection test failed after level adjustment	230004
Asynchronous mode not yet supported with FastSocket	16139
Error message "User Correction operating outside specified frequency range" not cleared in SGS-SGU pair	231327

1.7   Version 3.20.347.26

Released: November 2015

New Functionality

- FastSocket remote control
- Level offset
- Firmware update of SGU via SGS

Known Issues

Asynchronous mode not yet supported with FastSocket	16139

1.8   Version 3.20.140.60.1

Released: April 2015

New Functionality

- Improved SGU-connectivity

Fixed Issues

Restore extended frequency after reboot	13064
Issues with simultaneous pulse modulation + IQ modulation fixed	14440

User correction not taken into account after system restart	13468
Improved execution time for *RST	14396
SCPI Command "CAL:ALL:MEAS?" won't return when monitoring with SGMA-GUI	12006

1.9　Version 3.18.251.87

Released: August 2014

New Functionality

- Improved support for extension R&S®SGU
- File location selector in Ucor Export panel

Fixed Issues

Threeway PCIe-communication SGS-SGU-Host faulty	13086

Known Issues

SCPI Command "CAL:ALL:MEAS?" won't return when monitoring with SGMA-GUI	12006
User correction not taken into account after system restart	13468

1.10　Version 3.18.251.37

Released: May 2014

New Functionality

- Support for extension R&S®SGU
- Level dialogue has been extended with the function User Correction
- Majority of features can be set via a web gui interface

Known Issues

SCPI Command "CAL:ALL:MEAS?" won't return when monitoring with SGMA-GUI	12006
Threeway PCIe-communication SGS-SGU-Host faulty	13086

1.11　Version 3.01.158.22

Released: March 2014

New Functionality

- Support for RF board V10

Fixed Issues

*RST;*OPC? won't return when monitoring with SGMA-GUI	11994

Instrument driver won't find devices with FW version < 3.01.085 over PCie	12348

Known Issues

SCPI Command "CAL:ALL:MEAS?" won't return when monitoring with SGMA-GUI	12006

1.12   Version 3.01.085.23

Released: October 2013

New Functionality

- Support for RF board revision V9
- Support of new option SGS-K22 Pulse Modulation
- "Signal Valid" can be output to the external trigger connector
- Over temperature shutdown
- Testing installation packages before installation
- New option 'APASsive' for command SCPI command OUTPut:AMODe
- Monitoring frequency of external 1 GHz reference signal
- New icon for LO Source = EXT
- New SCPI commands FFAST and PFAST

NOTICE

Note: 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.

Beginning with firmware version 3.01.085.23 the PCie remote control interface employs a new protocol which is not compatible with the protocol used by earlier firmware versions.

Linux host:

Recompile the kernel mode driver using the source code which comes with the firmware.

Windows host:

A new kernel mode driver is installed together with SGMA-GUI.

Update all instruments before switching to the new PCie host kernel mode driver.

Fixed Issues

Not restoring ROSC:EXT:FREQ und ROSC:SOUR from a settings file any more	10568
Crest factor input with two decimal places	10402
Incorrect level range for constant VSWR	10406

Known Issues

Remote control and simultaneous monitoring on VXI-11 and HiSLIP not possible	11994 / 12006

1.13 Version 2.20.475.43

Released: July 2012

New Functionality

- Support of new option SGS-B112 I/Q modulation up to 12.75 GHz
- 64 bit kernel mode drivers for Windows and Linux
- Level dialog displays possible level range
- Internal adjustment shows delta temperature since last adjustment
- Installation of SGMA-GUI on Windows-PC w.o. Internet access

Fixed Issues

USB remote control now also stable for USB full speed mode	10113
Pressing the front side power button during boot causes inconsistent display of ext. reference frequency	10121
Faulty display of PEP between 6GHz and 12.75 GHz	10201
Sporadic fast bus errors	10323
Sporadic setting times >4 ms	10292

Known Issues

Remote control commands SYST:DATE and SYST:TIME stop PCIe remote control interface	10323

1.14 Version 2.20.417.20

Released: March 2012

New Functionality

- PEP and Crest display
- Modulator wideband state via fast PCIe
- Additional maintenance features (Factory recovery, USB install..)
- Eco mode
- HiSLIP – protocol support
- Improved monitoring via VXI-11 SGMA-GUI for Linux
- Simultaneous operation of SGMA-GUI and WinIQSIM2

Known Issues

USB remote control now also stable for USB full speed mode	10113
Pressing the front side power button during boot causes inconsistent display of ext. reference frequency	10121

1.15   Version 2.20.265.42

Released: September 2011

New Functionality

- SGMA-GUI for Linux
- PCIe remote control for Windows
- Improved temperature compensation (RF level)
- Improved adjustments

1.16   Version 2.15.355.14

Initial Version May 2011

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.
>
> If a firmware update of a SGS-SGU pair is required update the SGU before updating the SGS.

> **NOTICE**
>
> Beginning with firmware version 3.01.085.23 the PCIe remote control interface employs a new protocol which is not compatible with the protocol used by earlier firmware versions.
>
> **Linux host**:
>
> Recompile the kernel mode driver using the source code which comes with the firmware.
>
> **Windows host:**
>
> A new kernel mode driver is installed together with SGMA-GUI.
>
> Update all instruments before switching to the new PCIe host kernel mode driver.

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.

2.3   Installing new SGMA-GUI software

2.3.1   Windows

Supported operating systems:
- Windows Vista
- Windows 7
- Windows 8
- Windows 10 from version 1607

Administrator rights are necessary for installation and starting SGMA-GUI.

- Uninstall any previous version of SGMA-GUI before installing the new software.
- In Windows Explorer double-click **SGMA-GUI_4.30.046.295.exe** and follow instructions.

2.3.2   Linux

Copy file **SGMA-GUI-INSTALL_4.30.046.295** to your computer. Make the file executable and execute it in a terminal. Follow instructions.

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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