

R&S[®]ScopeSuite Release Notes

Software Version 5.40.1

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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[®]ScopeSuite is abbreviated as R&SScopeSuite.

PAD-TM: 3574_3288_02/05_00/CH/EN

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1 Information on the current version and history

1.1 Version 5.40.1

New functionality

Option/Topic	Functions
	Support only for R&S RTP, RTP-B
DDR5	<ul style="list-style-type: none"> • Timing Tests <ul style="list-style-type: none"> ○ Strobe Timing <ul style="list-style-type: none"> ▪ tWPRE2 ▪ tWPRE3 ▪ tWPRE4 ▪ tWPST0.5 ▪ tWPST1.5 ▪ tDQSL2PRE ▪ tDQSL3PRE ▪ tDQSL4PRE ▪ tDQSH_pre ▪ tDQSL_pre ○ Command Address Timing <ul style="list-style-type: none"> ▪ VciVW ▪ TcIVW ▪ VIH_L_AC ▪ TcIPW ▪ SRIN_cIVW ○ Chip Select Timing <ul style="list-style-type: none"> ▪ VciVW ▪ TcIVW ▪ VIH_L_AC ▪ TcIPW ▪ SRIN_cIVW ○ Clock Timing <ul style="list-style-type: none"> ▪ tCK ▪ tCk_Duty_UI_Error ▪ Rj_NoBUJ ▪ Dj_NoBUJ ▪ Tj_NoBUJ ▪ Pj_NoBUJ ▪ DDj_NoBUJ • Level Tests <ul style="list-style-type: none"> ○ Differential Input Slew Rate for CK <ul style="list-style-type: none"> ▪ SRIdiff Rising (CK) ▪ SRIdiff Falling (CK) ○ Differential Input Slew Rate for DQS <ul style="list-style-type: none"> ▪ SRIdiff Rising (DQS) ▪ SRIdiff Falling (DQS) ○ Differential Input Cross Point Voltage for CK <ul style="list-style-type: none"> ▪ VIX_CK_Ratio ○ Differential Input Cross Point Voltage for DQS <ul style="list-style-type: none"> ▪ VIX_DQS_Ratio ○ Differential Output Slew Rate for DQS <ul style="list-style-type: none"> ▪ SRQdiff Rising ▪ SRQdiff Falling

- Ac Overshoot & Undershoot for CK
 - Overshoot
 - Undershoot

Improvements

Option/Topic	Improvements
USB2.0	<ul style="list-style-type: none"> • The limits of EL_16 (Squelch Test) were updated based on latest USB 2.0 specifications (8th October 2021). The fail criteria have been changed from 100mV to 40mV. • Increased the sampling rate for full speed upstream and downstream signal quality test to avoid SigTest from having edge detection issues.
USB3.2	<ul style="list-style-type: none"> • The SSC deviation naming in the report has been changed. The term "SSC Deviation Max" has been updated to "SSC Deviation Peak", and the term "SSC Deviation Min" has been updated to "SSC Deviation Trough", to standardize the naming to be the consistent with the terminology used by SigTest.
D-PHY	<ul style="list-style-type: none"> • The warning message "Test unable to run due to license K27 not available" will be shown on status bar when user do not have K27 license to run MIPI 2.0 compliance test.
Ethernet 2.5/5/10G	<ul style="list-style-type: none"> • Supported expert mode for 2.5G/5G/10G BASE-T.
MGBASE-T1	<ul style="list-style-type: none"> • Added edge selection (both, rising, falling) for 2.5G/5G/10G. • Added guided step image for noise removal steps in linearity test. • Digital filter will be applied for 2.5G/5G/10G as default in linearity test case using improved noise filtering algorithm. Therefore, the digital filter GUI settings for 10G is removed.
DDR4/LPDDR4 /LPDDR4X	<ul style="list-style-type: none"> • Preamble mode, by default, will be configured as Auto. • P and N naming used for differential signals will be changed to T and C, as used in specification. • Adapted limits according to spec 4D.
DDR3	<ul style="list-style-type: none"> • Support Custom speed.
PCIe	<ul style="list-style-type: none"> • Added description to explain the usage of DC Block in the user manual.
DisplayPort	<ul style="list-style-type: none"> • Fixed wrong filter coefficient values in CTLE and Worst Cable Model. • Updated the Minimum PE Specification vs. TX_MEQ Limit Curve used in HBR3/HBR2 Level Verification Tests.
HDMI	<ul style="list-style-type: none"> • Add user defined serial pattern input property setting in GUI for Inter-pair skew test.

Tested firmware

Version	Functions
Firmware 5.40.1	This ScopeSuite version is tested against the RTx firmware version 5.40.1

Known issues

issue	Known Issues
Common	After installation ScopeSuite could fail on the first run of any test case. Restart the ScopeSuite and try again.

1.2 Version 5.35.1

New functionality

Option/Topic	Functions
	<p>Support only for R&S RTP, RTP-B</p> <ul style="list-style-type: none"> • DP 1.4a (RTP-K114) <ul style="list-style-type: none"> ○ Main-Link Tests <ul style="list-style-type: none"> ▪ Eye Diagram Tests ▪ Jitter Measurement Tests ▪ HBR/RBR Level Verification and Peak to Peak Differential Voltage Tests ▪ HBR3/HBR2 Level Verification Test ▪ HBR3/HBR2 Peak to Peak Differential Test ▪ Main-Link Frequency Compliance Test ▪ SSC Tests ▪ Intra-pair Skew Test ▪ AC Common Mode Noise Test ▪ Inter-Pair Skew Test ▪ HBR3 TX Differential RL Test ○ AUX CH Tests <ul style="list-style-type: none"> ▪ EYE Tests ▪ AUX_CH (Manchester-II) Sensitivity Test ▪ Termination DC Tests ○ DP_PWR Tests <ul style="list-style-type: none"> ▪ Inrush (Normative) and Outrush (Informative) Test • eDP 1.4b and eDP 1.5 (RTP-K115) <ul style="list-style-type: none"> ○ Main-Link Tests <ul style="list-style-type: none"> ▪ Eye Diagram Test ▪ Jitter Tests ▪ Differential Voltage Test ▪ Main-Link Frequency Compliance Test ▪ SSC Tests ▪ Intra-Pair Tests ▪ Inter-Pair Skew Test ○ AUX CH Tests <ul style="list-style-type: none"> ▪ EYE Tests ▪ Sensitivity Test
DisplayPort	

Improvements

Option/Topic	Improvements
USB2.0	<ul style="list-style-type: none"> • the GUI text "Receiver Sensitivity Offset" has been changed to "AWG Rx Sensitivity Offset" to clarify the settings is related to AWG setting.
C-PHY	<ul style="list-style-type: none"> • Eye Test now uses Advanced Eye Diagram Analysis (K136/K137)
D-PHY	<ul style="list-style-type: none"> • Eye Test now uses Advanced Eye Diagram Analysis (K136/K137).

	<ul style="list-style-type: none"> • Changed minimum bandwidth to 4GHz. • VOD(0), VOD(1), VOD Mismatch, Risetime(Tr) and Falltime(Tf) tests are now reported.
Ethernet	<ul style="list-style-type: none"> • Improved guided steps image for 2.5G Base-T transmitter non-linear distortion test with disturber. The test setup diagram has been revised to represent the test more accurately. • For 100BASE-T1, the common mode emission test will use log scale as default for the frequency axis.
DDR4/LPDDR4 /LPDDR4X	<ul style="list-style-type: none"> • Input receiver compliance mask for voltage and timing: change acquisition length for eye from ms to UI for better usability. • Single ended probe support for CK and DQS. • Support for scope internal clearance button to reset the scope when required.
DDR3	<ul style="list-style-type: none"> • Two channel support for data and strobe timing test case.
USB3.2-RX	<ul style="list-style-type: none"> • Tested against Anritsu Software MX190000A V10.00.01 • Tested against Anritsu Software MX183000A V10.00.01

Tested firmware

Version	Functions
Firmware 5.35.1	This ScopeSuite version is tested against the RTx firmware version 5.35.1

Known issues

issue	Known Issues
Common	Upgrading Firmware and ScopeSuite procedure: To prevent conflicting of License Server, the step to follow is to upgrade Firmware first, next uninstall ScopeSuite from control panel then install the latest version of ScopeSuite.

1.3 Version 5.30.1

New functionality

Option/Topic	Functions
	Support for only R&S RTP, RTP-B
	Calibration
USB3.2-RX (K102)	<ul style="list-style-type: none"> • USB3.2 Gen1 5GT/s <ul style="list-style-type: none"> ○ TD.1.8.1/TD.1.9.1 Amplitude and De-emphasis Calibration ○ TD.1.8.20/TD1.9.21 Short Channel Calibration ○ Connection Std-A, Std-B, microB <ul style="list-style-type: none"> ▪ TD.1.8.2 Upstream Rj, Sj and Eye Height Calibration ▪ TD1.8.2 Downstream Rj, Sj and Eye Height Calibration ○ Connection: Type-C <ul style="list-style-type: none"> ▪ TD.1.9.2 Rj and Sj Calibration • USB3.2 Gen2 10GT/s <ul style="list-style-type: none"> ○ TD.1.10.1 Amplitude, Pre-shoot and De-emphasis Calibration

- TD1.10.30 Short Channel Calibration
- TD.1.10.2...3Rj and Sj Calibration
- Connection: Std-A, microB, Type-C
 - Upstream Facing Port
 - TD.1.10.4...9 CLB Analysis
 - TD.1.10.10...11 Eye Width and Eye Height Calibration
 - Downstream Facing Port
 - TD.1.10.4...9 CLB Analysis
 - TD.1.10.10...11 Eye Width and Eye Height Calibration

Device

- USB3.2 Gen1 5GT/s
 - TD.1.8.3...19/TD1.9.3...20 Receiver Jitter Tolerance Test – Long channel
 - TD1.8.21...22/TD1.9.22...23 Receiver Jitter Tolerance Test – Short channel
- USB3.2 Gen2 10GT/s
 - TD.1.10.12...29 Receiver Jitter Tolerance Test – Long channel
 - TD.1.10.31...32 Receiver Jitter Tolerance Test – Short channel

Hub

- USB3.2 Gen1 5GT/s
 - TD.1.8.3...19/TD1.9.3...20 Receiver Jitter Tolerance Test – Long channel
 - TD1.8.21...22/TD1.9.22...23 Receiver Jitter Tolerance Test – Short channel
- USB3.2 Gen2 10GT/s
 - TD.1.10.12...29 Receiver Jitter Tolerance Test – Long channel
 - TD.1.10.31...32 Receiver Jitter Tolerance Test – Short channel

Host

- USB3.2 Gen1 5GT/s
 - TD.1.8.3...19/TD1.9.3...20 Receiver Jitter Tolerance Test – Long channel
 - TD1.8.21...22/TD1.9.22...23 Receiver Jitter Tolerance Test – Short channel
- USB3.2 Gen2 10GT/s
 - TD.1.10.12...29 Receiver Jitter Tolerance Test – Long channel
 - TD.1.10.31...32 Receiver Jitter Tolerance Test – Short channel

Improvements

Option/Topic	Improvements
Common	<ul style="list-style-type: none"> • After creating new session and checked on “Test Checked”, skew values is not updated to GUI. Update scope skew values to properties files so that ScopeSuite will update to GUI on starting of new session.
MGBase-T1	<ul style="list-style-type: none"> • Added informative values of signa_n, sigma_e, and P_max in reports for 149.5.2.2 Transmitter linearity test case
1000Base-T1	<ul style="list-style-type: none"> • Added digital filter property setting for RTP 8 GHz and above for transmitter distortion test
D-PHY	<ul style="list-style-type: none"> • Improved LP to HS separation algorithm. • Fixed channel skew not applied in LP Tests.
Ethernet	<ul style="list-style-type: none"> • Support ZNL model vector network analyzer • Improved guided steps for test setups using Link Partner • Support 2-channel oscilloscopes

HDMI	<ul style="list-style-type: none"> Added advanced eye for clock and data test
DDR4/LPDDR4 /LPDDR4X	<ul style="list-style-type: none"> New test case: Input receiver compliance mask for voltage and timing. (DQ Eye mask tests). User able to configure the mask parameters and its jump step length in the GUI. Configurable time out length in the GUI for strobe timing test case in case DUT has very less transitions. Custom speed selection in the GUI if DUT do not belong to any of the nominal speeds. Support for various preamble types. User is able to select 1TCK, 2TCK for preamble types shown in JEDEC. For preamble types not defined in specs, user may choose 'auto' to process.
DDR3	<ul style="list-style-type: none"> Read Write parameters configurable in GUI.

Tested firmware

Version	Functions
Firmware 5.30.1	This ScopeSuite version is tested against the RTx firmware version 5.30.1 on RTP-B, RTP & RTO6 & RTO2000 series.

Known issues

issue	Known Issues
Common	Upgrading Firmware and ScopeSuite procedure: To prevent conflicting of License Server, the step to follow is to upgrade Firmware first, next uninstall ScopeSuite from control panel then install the latest version of ScopeSuite.

1.4 Version 5.20.1

New functionality

Option/Topic	Functions
	Support for only R&S RTP, RTP-B
	1.2
	<ul style="list-style-type: none"> LP-TX Signaling Requirements (Group1) <ul style="list-style-type: none"> 1.1.1 ~1.1.7 HS-TX Signaling Requirements (Group2) <ul style="list-style-type: none"> 1.2.1 ~ 1.2.6, 1.2.10 ~1.2.20 HS-TX Signaling Requirements for Eye Measurements (Group2) <ul style="list-style-type: none"> 1.2.7 ~1.2.9, 1.2 21
C-PHY (K28)	2.1
	<ul style="list-style-type: none"> LP-TX Signaling Requirements (Group1) <ul style="list-style-type: none"> 1.1.1 ~1.1.8 HS-TX Signaling Requirements (Group2) <ul style="list-style-type: none"> 1.2.1 ~ 1.2.6, 1.2.10 ~1.2.13, 1.2.16~1.2.19 HS-TX Signaling Requirements for Eye Measurements (Group2) <ul style="list-style-type: none"> 1.2.7 ~1.2.9, 1.2 21 ~1.2.22

D-PHY (K27)	<p>Support for RTP, RTP-B, RTO6, RTO2000</p> <p>2.0/2.1/2.5</p> <ul style="list-style-type: none"> • Clock Lane HS-TX Signaling Requirements (Group4) <ul style="list-style-type: none"> ◦ 1.4.18 ~1.4.20 • HS Clock-To-Data Lane Timing Requirements (Group5) <ul style="list-style-type: none"> ◦ 1.5.8 ~ 1.5.10 • Eye Test <ul style="list-style-type: none"> ◦ 1.4.18, 1.4.20, 1.5 7
Automation K99	<ul style="list-style-type: none"> • Coverage of all eMMC test cases • Supports Python Client

Improvements

Option/Topic	Improvements
Common	<ul style="list-style-type: none"> • Guided steps: automatic update of the channel configuration images in the guided steps, according to the user configuration. • Guided steps: automatic update of the oscilloscope's images in the guided steps, according to the detected instrument. • Test case error handling enhancement for 10BASE-T1, 100BASE-T1,1000BASE-T1 and MGBASE-T1 • Support German numbering system (e.g. 0,25E-3). • Enhance Auto Y-axis scaling function
MGBase-T1	<ul style="list-style-type: none"> • Updated skew settings and support 'Retrieve Skew' button • "149.5.2.2 Transmitter linearity" test case: supported for 5G and 10G • Added hardware digital filter property to 10GBASE-T1 linearity test
PCIe	<ul style="list-style-type: none"> • New select type "Reference Clock". • "Reference Clock" test cases are moved out of "System Board".
100Base-T1	<ul style="list-style-type: none"> • "SLAVE transmitter timing jitter (96.5.4.3)" test case: "Edge Selection" (either, rising and falling) • "Common mode emission" test case: it is only using log scale if K18 is present • Add edge selection for rising, falling and both for jitter measurements
1000Base-T1	<ul style="list-style-type: none"> • Add edge selection for rising, falling and both for jitter measurements
Ethernet	<ul style="list-style-type: none"> • 1000BASE-T <ul style="list-style-type: none"> ◦ Peak Output Voltage (40.6.1.2.1): Measurement method is split: <ul style="list-style-type: none"> ▪ Amplitude /Min and Max ◦ Transmitter distortion (40.6.1.2.4): Distortion plot is added
USB/USB3.2	<ul style="list-style-type: none"> • USB2.0 "High speed Signal quality" tests: support 4 margins for the report • Hub > Downstream SuperSpeed Transmitted Eye test cases: the test has the wrong picture for the test fixture. The picture mentions 11" Device Test Fixture 2, but it should be 5" Host Test Fixture 2. (USB3.2) This applies to the corresponding test on the Host (DFP) as well. • SuperSpeed Transmitted Eye test case: in the guided step CP1 or CP0 are used instead of CP10

HDMI	<ul style="list-style-type: none"> The unit of channel skew is now displayed as "ps".
Ethernet 2.5/5/10G	<ul style="list-style-type: none"> The legacy K25 license is also working with Version 5.20.1 2.5GBaseT "MDI Return Loss test case": The stop frequency is changed from 250MHz to 125MHz based on the latest specification (IEEE 802.3 clause 126.8.2.1).
DDR4/LPDDR4 /LPDDR4X	<ul style="list-style-type: none"> Support of width trigger and up to three zone trigger to capture bursts of strobe signal. Support configurable DQ threshold and hysteresis

Tested firmware

Version	Functions
Firmware 5.20.1	This ScopeSuite version is tested against the RTx firmware version 5.20.1 on RTP-B, RTP & RTO6 & RTO2000 series.

Known issues

issue	Known Issues
Common	After installation ScopeSuite could fail on the first run of any test case. Restart the ScopeSuite and try again.

1.5 Version 5.0.1

New functionality

Option/Topic	Functions
Common	Support RTO 6
Common	eMMC support for RTP
Common	Merge k22 and k86 (eliminate k86)
Common	Merge k23 and k25 (eliminate k25)

2.1 TMDS

- All Clock Tests
- Single-Ended Tests
- Differential Timing Tests
- Differential Voltage Mask Tests
- Jitter Mask Tests
- Inter-Pair Skew (HF 1-3)

1.4b

- All Clock Tests
- Voltage Off Tests
- Single-Ended Tests
- Voltage Off Tests
- Differential Timing Tests
- Jitter Mask Tests
- Inter-Pair Skew (7-6)

MGBase-T1	<ul style="list-style-type: none"> • 149.5.2.3 Transmitter timing jitter master • 149.5.2.3 Transmitter timing jitter slave • 149.5.2.3.1 Transmit MDI random jitter in master mode • 149.5.2.3.2 Transmit MDI deterministic jitter in master mode • 149.5.2.2 Transmitter linearity (only 2.5G) • 149.5.2.6 Transmitter clock frequency • 149.5.2.3.2 Transmit MDI Even-Odd jitter in master mode • 149.5.2.4 Transmitter power spectral density (PSD) and power level • 149.5.2.5 Transmitter peak differential output • 149.5.2.1 Maximum output droop • 149.8.2.1 MDI return loss
DDR3/DDR3L/ LPDDR3, DDR4/LPDDR4	<ul style="list-style-type: none"> • Support configurable scaling modes (Auto/Reference) • Support write triggering method (Edge/ABR/Width) • Support CLK Off selection for DDR4 both online and offline execution. • Configurable hysteresis of address signals
Automation K99	<ul style="list-style-type: none"> • Support Sub-Test selections and its run API. • Support two channel mode for DDR4.

Improvements

Option/Topic	Improvements
Common	<ul style="list-style-type: none"> • ScopeSuite errors handling enhancement. • ScopeSuite log file enhancement • Communication protocol enhancement between ScopeSuite, Scope and VNA. • Enhancement of keeping ScopeSuite in front of firmware when running on scope.
DDR3/DDR3L/ LPDDR3, DDR4/LPDDR4 /LPDDR4X	<ul style="list-style-type: none"> • Error handling enhancement • Timing & electrical test cases enhancement • Re-design tDIPW measurement on CMD/ADD/CS • Smarter execution for Data Timing and Strobe Timing Tests
USB/USB3.2	<ul style="list-style-type: none"> • Property view enhancement. • Error message handling enhancement.
PCIe	<ul style="list-style-type: none"> • Test cases re-arrangement in different test subtypes.
Ethernet 1000Base- T/100Base-Tx	<ul style="list-style-type: none"> • Support calculation of 85 Ohm & 115 Ohm reference impedance in MDI return loss measurement.

Tested Firmware

Version	Functions
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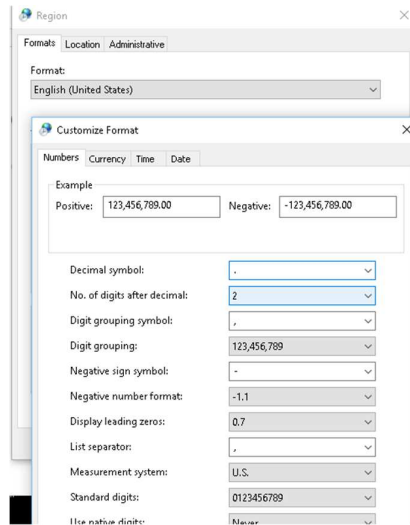
Firmware 4.80.1/5.0.1	This ScopeSuite Version is tested against the RTX Firmware Version 4.80.1 & 5.0.1 on RTP & RTO2000 series, 5.0.1 on RTO6.
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Known issues

issue	Known Issues
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With US windows OS and German ("," as a decimal point) numbering format, entering sessions in ScopeSuite will give error.

Opening session



MGBASE-T1	<ul style="list-style-type: none"> For 2.5G and 5G speed variants, the test case '149.5.2.2 Transmitter linearity (test mode 4)' has not been implemented. This is due to the standard and the official test methodology not being finalized and still worked on. For the test case '149.5.2.3.2 Transmit MDI deterministic jitter in master mode', it can yield negative jitter results. As above, standard and test methodology not finalized. For very long acquisitions it can happen that ScopeSuite is running out of memory. Please close other applications and restart ScopeSuite.
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HDMI 1.4 Voltage Off Tests fails with firmware 4.80.1

1.6 Version 4.80.1

New functionality

Option/Topic	Functions
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USB 3.2 Gen 1 (5 GT/s)	<p>Official SigTest version 3.2.11.4 (see installation instructions 3.2.2.1) (NOTE: SSC Profile Test will need higher version of SigTest)</p> <ul style="list-style-type: none"> Device - Low Frequency Periodic Signaling Tx (TD.1.1)
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- Device – Short Channel Transmitted Eye (TD.1.3)
- Device – Long Channel Transmitted Eye (TD.1.3)
- Device – SSC Profile (TD.1.6)
- Host - Low Frequency Periodic Signaling Tx (TD.1.1)
- Host – Short Channel Transmitted Eye (TD.1.3)
- Host – Long Channel Transmitted Eye (TD.1.3)
- Host – SSC Profile (TD.1.6)
- Hub – Upstream Low Frequency Periodic Signaling Tx (TD.1.1)
- Hub – Upstream Short Channel Transmitted Eye (TD.1.3)
- Hub – Upstream Long Channel Transmitted Eye (TD.1.3)
- Hub – Upstream SSC Profile (TD.1.6)
- Hub – Downstream Low Frequency Periodic Signaling Tx (TD.1.1)
- Hub – Downstream Short Channel Transmitted Eye (TD.1.3)
- Hub – Downstream Long Channel Transmitted Eye (TD.1.3)
- Hub – Downstream SSC Profile (TD.1.6)

**USB 3.2 Gen 2
(10 GT/s)**
Official SigTest version 4.0.23.2 (see installation instructions 3.2.2.1)

- Device – Short Channel Transmitted Eye (TD.1.4)
- Device – Long Channel Transmitted Eye (TD.1.4)
- Device – SSC Profile (TD.1.7)
- Device – Transmit Equalization Test (TD.1.5)
- Host – Short Channel Transmitted Eye (TD.1.4)
- Host – Long Channel Transmitted Eye (TD.1.4)
- Host – SSC Profile (TD.1.7)
- Host – Transmit Equalization Test (TD.1.5)
- Hub – Upstream Short Channel Transmitted Eye (TD.1.4)
- Hub – Upstream Long Channel Transmitted Eye (TD.1.4)
- Hub – Upstream SSC Profile (TD.1.7)
- Hub – Upstream Transmit Equalization Test (TD.1.5)
- Hub – Downstream Short Channel Transmitted Eye (TD.1.4)
- Hub – Downstream Long Channel Transmitted Eye (TD.1.4)
- Hub – Downstream SSC Profile (TD.1.7)
- Hub – Downstream Transmit Equalization Test (TD.1.5)

PCIe 3.0
Official SigTest version 3.2.0 (pre-installed)

- Add-In card – Signal Quality
- Add-In card – Tx Equalization
- System Board – Signal Quality
- System Board – Tx Equalization
- System Board – Reference Clock

10BASE-T1L	<ul style="list-style-type: none"> • 146.5.4.1 Transmitter output voltage • 146.5.4.2 Transmitter output droop • 146.5.4.3 Transmitter timing jitter • 146.5.4.4 Transmitter power spectral density (PSD) and power level • 146.5.4.5 Transmit clock frequency • 146.8.3 MDI return loss • 146.8.4 MDI mode conversion loss
1000BASE-T1	Test Head verification
DPHY	1.2 <ul style="list-style-type: none"> • 1.5.5 Initial HS Skew Calibration Burst T_SKEWCAL-SYNC and T_SKEWCAL • 1.5.6 Periodic HS Skew Calibration Burst T_SKEWCAL-SYNC and T_SKEWCAL
DDR3/DDR3L/ LPDDR3, DDR4/LPDDR4	Support Expert Mode
LPDDR4X	<ul style="list-style-type: none"> • Clock Timing (13.3) • Data Timing (4.24.1.2, 4.24.1.3) • Strobe Timing (8.3.1, 4.24.1, 4.25.1) • Command Timing (13.7) • Address Timing (13.7) • Chip Select Timing (13.7) • AC & DC Input Levels for ADD and CMD (8.1) • AC Input Levels for CK (8.3.3) • AC Overshoot & Undershoot for ADD and CMD and CTRL (8.3.4) • AC Overshoot & Undershoot for CK (8.3.5) • AC Overshoot & Undershoot for DQ,DQS and DM (8.3.6) • Input Slew Rate for ADD and CMD (8.4.2) • AC & DC Output Levels for DQ (9.2) • Output Slew Rate for DQ (9.4) • AC & DC Input Levels for CK (8.3.2) • Input Slew Rate for CK (8.4.1) • Differential Cross Point Voltage for CK (8.5) • AC Input Levels for DQS (8.7.2) • AC Differential Cross Point Voltage for DQS (8.7.4) • Input Slew Rate for DQS (8.7.5) • Differential AC Output Levels for DQS (9.3) • Differential Output Slew Rate for DQS (9.5)
Automation K99	<ul style="list-style-type: none"> • Coverage of all 10BASE-T1L test cases • Coverage of all DDR3, DDR3L, DDR4, LPDDR4, LPDDR4X

Improvements

Option/Topic	Improvements
Common	<ul style="list-style-type: none"> • RSScopesuite log file enhancement • Add build number and build type for beta installer • Communication protocol enhancement

	<ul style="list-style-type: none"> Support High Definition as standard feature on new serial number scopes
10BASE-T1S	Removed common mode conversion loss test case and updated return loss limits
100BASE-T1	<ul style="list-style-type: none"> CommonModeEmission is issuing a warning above 70MHz Improved reporting
1000BASE-T1	Changed filter for jitter test cases from 2 MHz to 5 MHz
100BASE-TX	AOI Template Test changed from mandatory to informative
DDR3/DDR3L/ LPDDR3, DDR4/LPDDR4	<ul style="list-style-type: none"> Error handling enhancement Electrical test cases enhancement

Tested Firmware

Version	Functions
Firmware 4.80.1	This Scope Suite Version is tested against the RTX Firmware Version 4.80.1

Known issues

issue	Known Issues
PCIe	In older Windows 10 versions, PCIe3 test cases may prompt crash message as SigTest exits.

2 Modifications to the documentation

The current documentation is up-to-date.

3 Software update

3.1 Update information

R&S ScopeSuite can be installed on Windows 7,8 and 10 systems.

You need a VISA installed. The system is tested against R&S VISA 5.8.5 and we recommend to use this or a higher version.

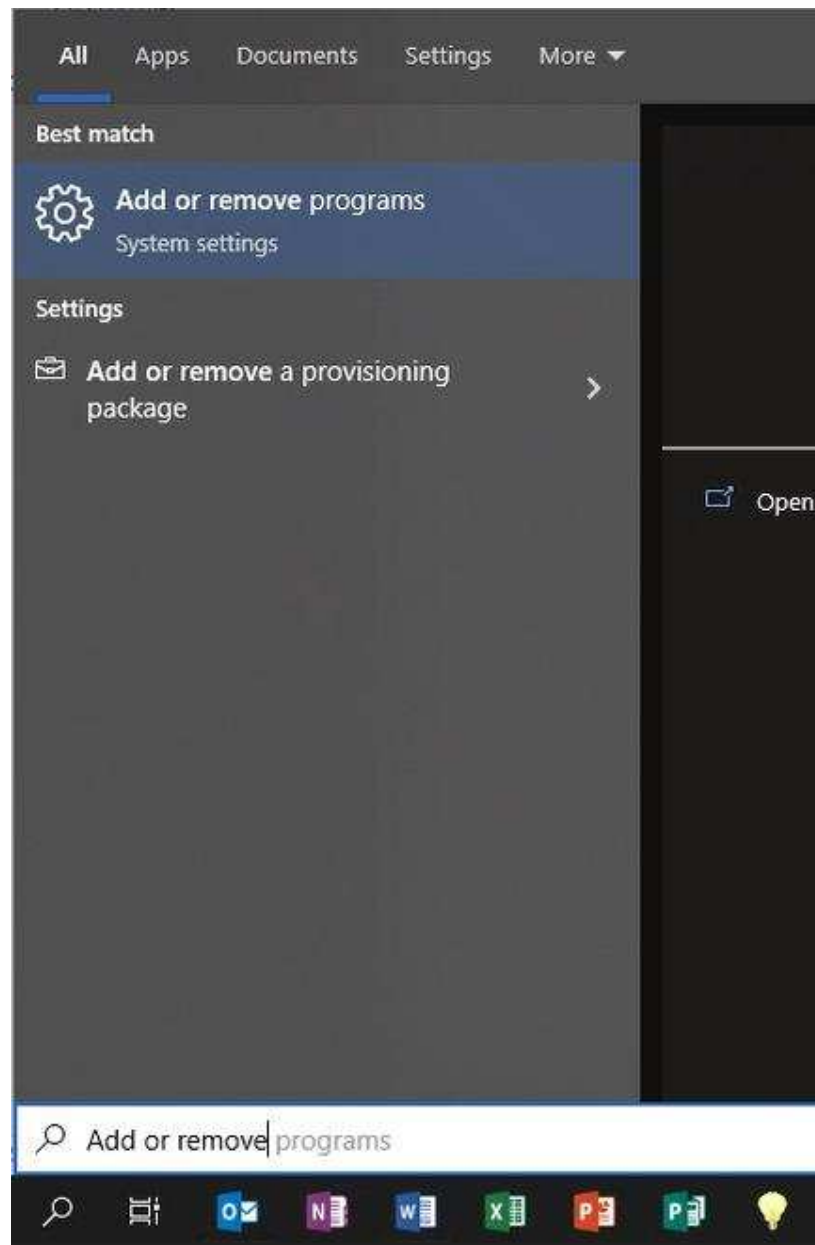
www.rohde-schwarz.com/rsvisa

3.2 Updating the firmware

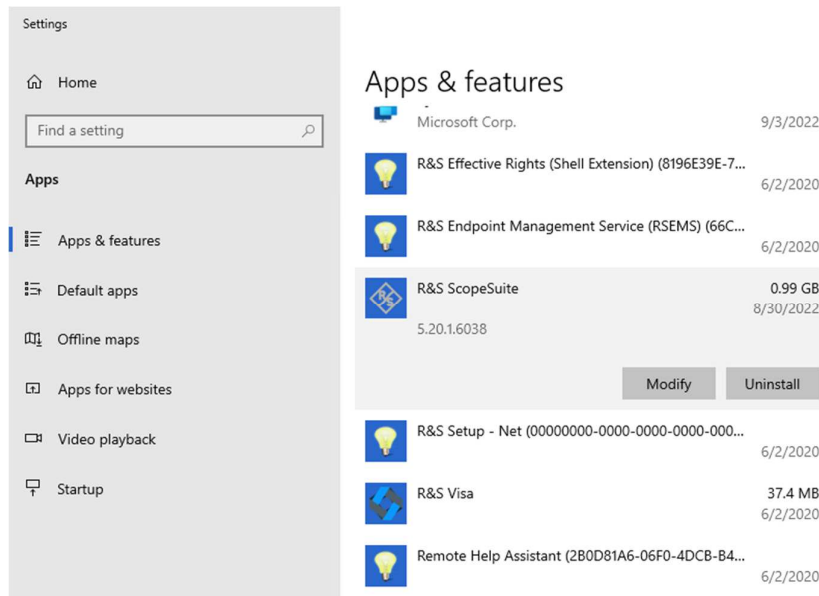
3.2.1 Uninstall old versions

It is recommended to remove older versions manually before starting installation:

1. Search for “Add or remove programs”



2. In Apps & features uninstall ScopeSuite



3.2.2 Install R&S ScopeSuite

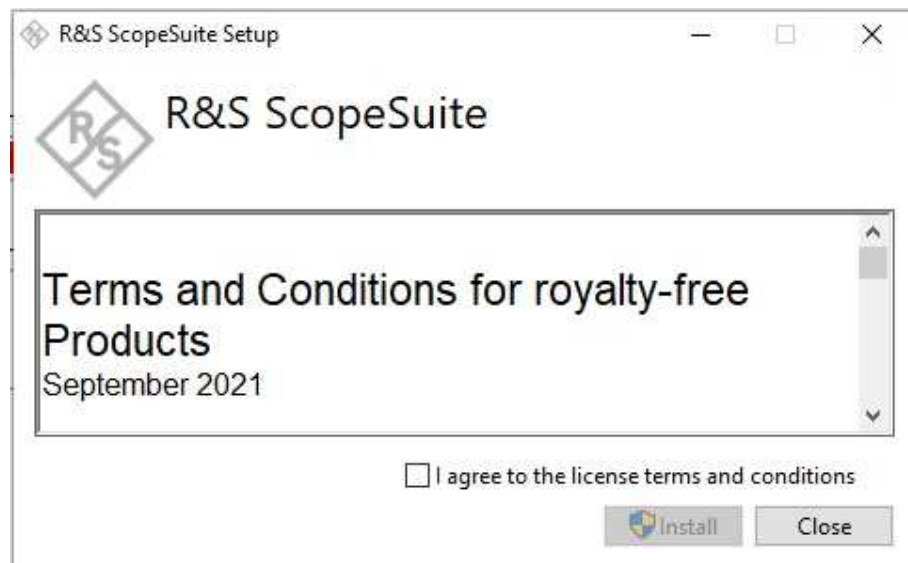
You can install the R&S ScopeSuite on Windows 7,8,10 and 11.

When you install the R&S ScopeSuite on a R&S RTO/RTP please reboot the R&S RTO/RTP after the installation.

To install the R&S ScopeSuite:

1. Start the "RSScopeSuiteSetup.exe".

An Installation wizard opens:



2. Follow the instructions to complete the installation.

3.2.2.1 SigTest Installation for USB 3.2

In order to perform the USB 3.2 tests, the SigTest versions 3.2.11.4 (Gen1) and 4.0.23.2 (Gen2) have to be installed from the Intel website:

https://www.intel.de/content/www/de/de/design/technology/high-speed-io/tools.html?grouping=EMT_Content%20Type&sort=title:asc

Follow the individual installation instructions.

3.2.3 Log files

In case you encounter problems, it is helpful to supply us log files and send along a waveform from the scope when the problem occurred.

The log files can be found here:

<My Documents folder>\Rohde-Schwarz\RSScopeSuite\<VersionNumber>\Logs

3.2.4 Error recovery

- Check the oscilloscope firmware version. Confirm that it is the same as the version stated in "Tested Firmware".
- Check for loose connections. Make sure the probe is connected to the test point firmly.
- Check if the DUT is in the correct test mode.
- If the problem persists, soft reboot the instrument.
Select "Power" button (bottom right) followed by "Exit". Launch the application from the desktop ("RTx" for oscilloscope and "Vector Network Analyzer" for VNA).
- If the problem still persists, hard reboot the instrument by switching it off and on again.

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