

R&S® WinIQSIM2 SIMULATION SOFTWARE

Specifications



Specifications
Version 22.00

ROHDE & SCHWARZ

Make ideas real



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Definitions

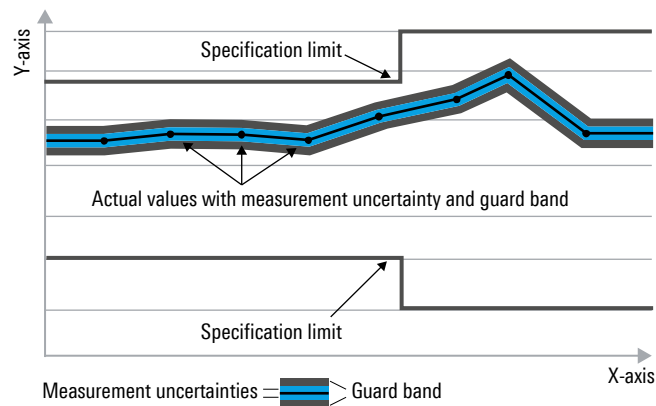
General

Product data applies under the following conditions:

- Three hours of storage at ambient temperature followed by 30 minutes of warm-up operation
- Specified environmental conditions met
- Recommended calibration interval adhered to
- All internal automatic adjustments performed, if applicable

Specifications with limits

Represent warranted product performance by means of a range of values for the specified parameter. These specifications are marked with limiting symbols such as $<$, \leq , $>$, \geq , \pm , or descriptions such as maximum, limit of, minimum. Compliance is ensured by testing or is derived from the design. Test limits are narrowed by guard bands to take into account measurement uncertainties, drift and aging, if applicable.



Non-traceable specifications with limits (n. trc.)

Represent product performance that is specified and tested as described under “Specifications with limits” above. However, product performance in this case cannot be warranted due to the lack of measuring equipment traceable to national metrology standards. In this case, measurements are referenced to standards used in the Rohde & Schwarz laboratories.

Specifications without limits

Represent warranted product performance for the specified parameter. These specifications are not specially marked and represent values with no or negligible deviations from the given value, e.g. dimensions or resolution of a setting parameter. Compliance is ensured by design.

Typical data (typ.)

Characterizes product performance by means of representative information for the given parameter. When marked with $<$, $>$ or as a range, it represents the performance met by approximately 80 % of the instruments at production time. Otherwise, it represents the mean value.

Nominal values (nom.)

Characterize product performance by means of a representative value for the given parameter, e.g. nominal impedance. In contrast to typical data, a statistical evaluation does not take place and the parameter is not tested during production.

Measured values (meas.)

Characterize expected product performance by means of measurement results gained from individual samples.

Uncertainties

Represent limits of measurement uncertainty for a given measurand. Uncertainty is defined with a coverage factor of 2 and has been calculated in line with the rules of the Guide to the Expression of Uncertainty in Measurement (GUM), taking into account environmental conditions, aging, wear and tear.

Device settings and GUI parameters are designated with the format “parameter: value”.

Non-traceable specifications with limits, typical data as well as nominal and measured values are not warranted by Rohde & Schwarz.

In line with the 3GPP standard, chip rates are specified in million chips per second (Mcps), whereas bit rates and symbol rates are specified in billion bit per second (Gbps), million bit per second (Mbps), thousand bit per second (kbps), million symbols per second (MSPS) or thousand symbols per second (ksps), and sample rates are specified in million samples per second (Msample/s). Gbps, Mcps, Mbps, MSPS, kbps, ksps and Msample/s are not SI units.

Introduction

R&S®WinIQSIM2 has been especially developed for easily generating digitally modulated signals. The graphical user interface allows intuitive operation, supported by context-sensitive help. By offering a convenient way to create any standard-compliant waveform with all the included standards and to generate multicarrier signals as well as multisegment waveforms, R&S®WinIQSIM2 is suitable for a wide range of applications.

The signals generated with the aid of the R&S®WinIQSIM2 software can be output by the R&S®SMW200A (R&S®SMW-B9/-B10 options), R&S®SMM100A (R&S®SMM-B9 option), R&S®SMBV100B, R&S®SMCV100B, R&S®SGT100A, R&S®SFI100A (R&S®SGT-K510 option) vector signal generators and by the PVT360A performance vector tester. Some standards also work for the CMW500/CMW100/R&S®CMW290/CMP200/CMP180 radio communication testers, the R&S®CMW270 wireless connectivity tester and the CMA radio test set. R&S®WinIQSIM2 can be downloaded from www.rohde-schwarz.com – search term: WinIQSIM2.

This document describes the capabilities of the R&S®WinIQSIM2 software. Note that additional hardware limitations of the used Rohde & Schwarz signal generator (especially maximum signal bandwidth, ARB memory size and maximum sample clock rate) apply. For instrument-specific data, see the specifications document of the respective Rohde & Schwarz instrument.

For detailed specifications of the supported digital standards, see “Digital Standards for Signal Generators” (PD 5213.9434.22) specifications and “GNSS and Avionics Simulation for Rohde & Schwarz Signal Generators” (PD 3607.6896.22) specifications.

Key features

Large variety of digital standards

- Cellular standards
 - 5G New Radio, incl. Rel. 15, Rel. 16, Rel. 17 and Rel. 18
 - Beyond 5G
 - LTE, incl. Rel. 8, Rel. 9, Rel. 10, Rel. 11, Rel. 12, Rel. 13, Rel. 14 and Rel. 15
 - Cellular IoT (eMTC and NB-IoT), incl. Rel. 13, Rel. 14, Rel. 15, Rel. 16 and Rel. 17
 - OneWeb reference signals and OneWeb user-defined signal generation
 - 3GPP FDD with HSDPA, HSUPA and HSPA+ (HSPA Evolution)
 - CDMA2000 with 1xEV-DV
 - 1xEV-DO Rev. A, Rev. B
 - TD-SCDMA
 - GSM/EDGE
 - EDGE Evolution, VAMOS
 - Verizon 5GTF signals
 - TETRA Release 2
- Wireless connectivity standards
 - WLAN IEEE 802.11a/b/g/n/j/p/ac/ax/be/bn/ad/ay
 - HRP UWB
 - UWB (ECMA-368)
 - Bluetooth®, up to Release 6.0
 - IEEE 802.15.4 OQPSK
 - NFC A/B/F including EMV type A/B
 - LoRa
- Broadcast standards
 - DVB-T/DVB-H
 - DVB-S2/DVB-S2X/DVB-S2X Annex E/Annex M
 - DVB-RCS2
- Navigation standards
 - GPS, GLONASS, Galileo, BeiDou (Compass), NavIC/IRNSS
- Other standards
 - OFDM signal generation
 - AWGN

Additional systems in R&S®WinIQSIM2

- Custom digital waveforms allow the generation of user-definable digital signals while offering user-selectable modulation parameters
- Multicarrier CW signal generation
- Multicarrier generation allows several digital signals to be combined to form one waveform with different frequency offsets
- Multisegment waveform function makes it possible to have multiple different waveforms in an arbitrary waveform generator's memory and ensures minimum transition times, while even seamless transitions are possible
- AWGN generation and addition to the signal
- Import function to import I/Q samples via a server connection into the R&S®WinIQSIM2 signal generation chain where filtering can be performed and AWGN can be added

Extended graphics

- I and Q versus time
- Absolute value and phase versus time
- Vector diagram
- Constellation diagram
- FFT magnitude showing the spectrum of the signal
- Eye diagram of I and Q
- Complementary cumulative distribution function (CCDF)

Convenient connections

- Waveform transmission via GPIB, USB and LAN
- Waveforms can be locally stored on the PC; a USB memory stick can be used for data transmission
- Control of instruments via remote desktop connection via LAN

Overview of digital standards on the different instruments

The following table gives an overview of the standards that are available for the different instruments, as well as of the respective option types. For better readability, option types are abbreviated as follows:

The R&S®SMW-K255 option is referred to as “SMW-K255”, and so on.

Vector signal generators

	R&S® SMW200A	R&S® SMM100A	R&S® SMBVB100B	R&S® SMCVB100B	R&S® SGT100A	R&S® SFI100A
Cellular standards						
5G New Radio Release 15	SMW-K444	SMM-K444	SMBVB-K444	SMCVB-K444	SGT-K444	SFI-K444
5G New Radio Release 16	SMW-K448	SMM-K448	SMBVB-K448	SMCVB-K448	SGT-K448	SFI-K448
5G New Radio Release 17/18	SMW-K471	SMM-K471	SMBVB-K471	SMCVB-K471	SGT-K471	SFI-K471
5G New Radio sidelink	SMW-K470	SMM-K470	SMBVB-K470	SMCVB-K470	SGT-K470	–
Beyond 5G	SMW-K484	SMM-K484	–	–	–	–
Verizon 5GTF signals	SMW-K418	–	SMBVB-K418	SMCVB-K418	SGT-K418	–
LTE Release 8	SMW-K255	SMM-K255	SMBVB-K255	SMCVB-K255	SGT-K255	–
LTE Release 9	SMW-K284	SMM-K284	SMBVB-K284	SMCVB-K284	SGT-K284	–
LTE Release 10 (LTE-Advanced)	SMW-K285	SMM-K285	SMBVB-K285	SMCVB-K285	SGT-K285	–
LTE Release 11	SMW-K412	SMM-K412	SMBVB-K412	SMCVB-K412	SGT-K412	–
LTE Release 12	SMW-K413	SMM-K413	SMBVB-K413	SMCVB-K413	SGT-K413	–
LTE Releases 13/14/15	SMW-K419	SMM-K419	SMBVB-K419	SMCVB-K419	SGT-K419	–
Cellular IoT Release 13	SMW-K415	SMM-K415	SMBVB-K415	SMCVB-K415	SGT-K415	–
Cellular IoT Release 14	SMW-K443	SMM-K443	SMBVB-K443	SMCVB-K443	SGT-K443	–
Cellular IoT Release 15/16/17	SMW-K446	SMM-K446	SMBVB-K446	SMCVB-K446	SGT-K446	–
OneWeb user-defined signal generation	SMW-K430	–	–	–	–	–
OneWeb reference signals	SMW-K355	–	–	–	–	–
3GPP FDD	SMW-K242	SMM-K242	SMBVB-K255	SMCVB-K255	SGT-K255	–
3GPP FDD HSPA/HSPA+, enhanced MS/BS tests	SMW-K283	SMM-K283	SMBVB-K255	SMCVB-K255	SGT-K255	–
GSM/EDGE	SMW-K240	SMM-K240	SMBVB-K240	SMCVB-K240	SGT-K240	–
EDGE Evolution	SMW-K241	SMM-K241	SMBVB-K241	SMCVB-K241	SGT-K241	–
CDMA2000	SMW-K246	SMM-K246	SMBVB-K246	SMCVB-K246	SGT-K246	–
1xEV-DO	SMW-K247	SMM-K247	SMBVB-K247	SMCVB-K247	SGT-K247	–
1xEV-DO Rev. B	SMW-K287	SMM-K287	SMBVB-K287	SMCVB-K287	SGT-K287	–
TD-SCDMA	SMW-K250	SMM-K250	SMBVB-K250	SMCVB-K250	SGT-K250	–
TD-SCDMA enhanced BS/MS tests, including HSDPA	SMW-K251	SMM-K251	SMBVB-K251	SMCVB-K251	SGT-K251	–
TETRA Release 2	SMW-K268	–	–	–	SGT-K268	–
Wireless connectivity standards						
IEEE 802.11a/b/g/n/j/p	SMW-K254	SMM-K254	SMBVB-K254	SMCVB-K254	SGT-K254	–
IEEE 802.11ac	SMW-K286	SMM-K286	SMBVB-K286	SMCVB-K286	SGT-K286	–
IEEE 802.11ax	SMW-K442	SMM-K442	SMBVB-K442	SMCVB-K442	SGT-K442	–
IEEE 802.11be	SMW-K447	SMM-K447	SMBVB-K447	SMCVB-K447	SGT-K447	–
IEEE 802.11bn	SMW-K485	SMM-K485	–	–	–	–
IEEE 802.11ad	SMW-K441	–	–	–	–	SFI-K441
IEEE 802.11ay	SMW-K477	–	–	–	–	SFI-K477
HRP UWB	SMW-K449	SMM-K449	SMBVB-K449	–	–	–
HRP UWB MMS	SMW-K481	SMM-K481	–	–	–	–
HRP UWB sensing	SMW-K482	SMM-K482	–	–	–	–
IEEE 802.15.4 OQPSK	SMW-K480	SMM-K480	SMBVB-K480	–	–	–
Bluetooth®	SMW-K260	SMM-K260	SMBVB-K260	SMCVB-K260	SGT-K260	–
Bluetooth® 5.x	SMW-K417	SMM-K417	SMBVB-K417	SMCVB-K417	SGT-K417	–
Bluetooth® 6.0	SMW-K478	SMM-K478	SMBVB-K478	SMCVB-K478	SGT-K478	–
NFC A/B/F	SMW-K289	SMM-K289	SMBVB-K289	SMCVB-K289	SGT-K289	–
LoRa	SMW-K431	SMM-K431	SMBVB-K431	SMCVB-K431	SGT-K431	–

	R&S® SMW200A	R&S® SMM100A	R&S® SMBV100B	R&S® SMCV100B	R&S® SGT100A	R&S® SFI100A
Broadcast standards						
DVB-H/DVB-T	SMW-K252	SMM-K252	SMBVB-K252	SMCVB-K252	SGT-K252	–
DVB-S2/DVB-S2X	SMW-K416	SMM-K416	SMBVB-K416	SMCVB-K416	SGT-K416	–
DVB-RCS2	SMW-K469	SMM-K469	SMBVB-K469	SMCVB-K469	SGT-K469	–
DVB-S2X Annex E	SMW-K476	SMM-K476	SMBVB-K476	SMCVB-K476	SGT-K476	–
DVB-S2X Annex M	SMW-K483	SMM-K483	SMBVB-K483	–	–	–
Navigation standards						
GPS (1 satellite)	SMW-K244	SMM-K244	SMBVB-K244	SMCVB-K244	SGT-K244	–
Galileo (1 satellite)	SMW-K266	SMM-K266	SMBVB-K266	SMCVB-K266	SGT-K266	–
GLONASS (1 satellite)	SMW-K294	SMM-K294	SMBVB-K294	SMCVB-K294	SGT-K294	–
NavIC/IRNSS (1 satellite)	SMW-K297	SMM-K297	SMBVB-K297	SMCVB-K297	SGT-K297	–
Modernized GPS (1 satellite with L2C or L5)	SMW-K298	SMM-K298	SMBVB-K298	SMCVB-K298	SGT-K298	–
BeiDou (1 satellite)	SMW-K407	SMM-K407	SMBVB-K407	SMCVB-K407	SGT-K407	–
Modernized BeiDou (1 satellite)	SMW-K432	SMM-K432	SMBVB-K432	SMCVB-K432	SGT-K432	–
Modernized GLONASS (1 satellite)	SMW-K423	SMM-K423	SMBVB-K423	SMCVB-K423	SGT-K423	–
XONA Pulsar X1	SMW-K440	–	SMBVB-K440	–	–	–
Other standards and modulation systems						
Custom digital modulation	SMW-B9/-B10	SMM-K520	SMBVB-K520	SMCVB-K199	SGT-K510	SFI-K499
OFDM signal generation	SMW-K414	SMM-K414	SMBVB-K414	SMCVB-K414	SGT-K414	SFI-K414
Multicarrier CW	SMW-K261	SMM-K261	SMBVB-K261	SMCVB-K261	SGT-K261	SFI-K261
AWGN	SMW-K262	SMM-K262	SMBVB-K262	SMCVB-K262	SGT-K262	–

Performance vector tester

A subset of R&S®WiniQSIM2 options is supported for the PVT360A.

R&S®PVT-KW149	AWGN (same feature set as xxx-K262)
R&S®PVT-KW300	GSM (same feature set as xxx-K240 and -K241)
R&S®PVT-KW301	WCDMA (same feature set as xxx-K242 and -K283)
R&S®PVT-KW310	LTE (LTE Releases 8 to 15 together with eMTC/Cat-M1 feature set of xxx-K415, -K443 and -K446)
R&S®PVT-KW313	NB-IoT (NB-IoT feature set of xxx-K415, -K443 and -K446)
R&S®PVT-KW320	5G NR Release 15/16 (same feature set as xxx-K444 and -K448)
R&S®PVT-KW326	5G NR Release 17 (same feature set as xxx-K471)
R&S®PVT-KW400	Bluetooth® (same feature set as xxx-K260 and -K417)
R&S®PVT-KW410	WLAN IEEE 802.11a/b/g/n/j/ac (same feature set as xxx-K254 and -K286)
R&S®PVT-KW411	WLAN IEEE 802.11ax (same feature set as xxx-K442)
R&S®PVT-KW412	WLAN IEEE 802.11be (same feature set as xxx-K447)
R&S®PVT-KW414	WLAN IEEE 802.11bn (same feature set as xxx-K485)
R&S®PVT-KW600	OneWeb user-defined waveforms (same feature set as xxx-K430)

Radio communication testers

A subset of R&S®WinIQSIM2 options is supported for the CMP200.

R&S®CMP-KW300	HRP UWB (NB-IoT feature set as xxx-K449)
R&S®CMP-KW601	5G NR Release 15/16 (same feature set as xxx-K444 and -K448)
R&S®CMP-KW602	5G NR Release 17 (same feature set as xxx-K471)

A subset of R&S®WinIQSIM2 options is supported for the CMP180.

R&S®CMP-KW120	AWGN (same feature set as xxx-K262)
R&S®CMP-KW220	GNSS (same feature set as xxx-K244, -K266, -K294, -K297, -K298, -K407 and -K432)
R&S®CMP-KW250	NB-IoT (NB-IoT feature set of xxx-K415, -K443 and -K446)
R&S®CMP-KW280	LP-IoT (same feature set as xxx-K431)
R&S®CMP-KW310	Bluetooth® (same feature set as xxx-K260 and -K417)
R&S®CMP-KW316	Bluetooth® channel sounding (same feature set as xxx-K478)
R&S®CMP-KW350	WLAN IEEE 802.11a/b/g/n/j/ac (same feature set as xxx-K254 and -K286)
R&S®CMP-KW351	WLAN IEEE 802.11ax (same feature set as xxx-K442)
R&S®CMP-KW352	WLAN IEEE 802.11be (same feature set as xxx-K447)
R&S®CMP-KW353	WLAN IEEE 802.11bn (same feature set as xxx-K485)
R&S®CMP-KW420	GSM (same feature set as xxx-K240 and -K241)
R&S®CMP-KW440	WCDMA (same feature set as xxx-K242 and -K283)
R&S®CMP-KW480	CDMA2000 1x RTT (same feature set as xxx-K246, -K247 and -K287)
R&S®CMP-KW500	LTE (LTE Releases 8 to 15 together with eMTC/Cat-M1 feature set of xxx-K415, -K443 and -K446)
R&S®CMP-KW570	LTE C-V2X (V2X feature set of xxx-K419)
R&S®CMP-KW601	5G NR Release 15/16 (same feature set as xxx-K444 and -K448)
R&S®CMP-KW602	5G NR Release 17 (same feature set as xxx-K471)
R&S®CMP-KW670	5G NR C-V2X (same feature set as xxx-K470)

A subset of R&S®WinIQSIM2 options is supported for the CMX500.

R&S®CMX-KW120	AWGN (same feature set as xxx-K262)
R&S®CMX-KW220	GNSS (same feature set as xxx-K244, -K266, -K294, -K297, -K298, -K407 and -K432)
R&S®CMX-KW250	NB-IoT (NB-IoT feature set of xxx-K415, -K443 and -K446)
R&S®CMX-KW310	Bluetooth® (same feature set as xxx-K260 and -K417)
R&S®CMX-KW350	WLAN IEEE 802.11a/b/g/n/j/ac (same feature set as xxx-K254 and -K286)
R&S®CMX-KW351	WLAN IEEE 802.11ax (same feature set as xxx-K442)
R&S®CMX-KW352	WLAN IEEE 802.11be (same feature set as xxx-K447)
R&S®CMX-KW353	WLAN IEEE 802.11bn (same feature set as xxx-K485)
R&S®CMX-KW420	GSM (same feature set as xxx-K240 and -K241)
R&S®CMX-KW440	WCDMA (same feature set as xxx-K242 and -K283)
R&S®CMX-KW500	LTE (LTE Releases 8 to 15 together with eMTC/Cat-M1 feature set of xxx-K415, -K443 and -K446)
R&S®CMX-KW570	LTE C-V2X (V2X feature set of xxx-K419)
R&S®CMX-KW601	5G NR Release 15/16 (same feature set as xxx-K444 and -K448)
R&S®CMX-KW602	5G NR Release 17 (same feature set as xxx-K471)
R&S®CMX-KW670	5G NR C-V2X (same feature set as xxx-K470)

A subset of R&S®WinIQSIM2 options is supported for the CMW500 and CMW100.

R&S®CMW-KW010	AWGN (same feature set as xxx-K262)
R&S®CMW-KW200	GSM/EDGE (same feature set as xxx-K240)
R&S®CMW-KW201	EDGE Evolution (same feature set as xxx-K241)
R&S®CMW-KW300	LTE NB-IoT (NB-IoT feature set as xxx-K415)
R&S®CMW-KW400	WCDMA (same feature set as xxx-K242)
R&S®CMW-KW401	HSDPA (same feature set as xxx-K243)
R&S®CMW-KW402	HSUPA (same feature set as xxx-K245)
R&S®CMW-KW403	WCDMA Release 7 HSPA+ (same feature set as xxx-K259)
R&S®CMW-KW500	LTE (same feature set as xxx-K255)
R&S®CMW-KW502	LTE Release 10 (same feature set as xxx-K285)
R&S®CMW-KW504	LTE Release 12 (same feature set as xxx-K413)
R&S®CMW-KW514	LTE Release 13 LAA (LAA features set of xxx-K419)
R&S®CMW-KW570	LTE Release 14 C-V2X (V2X feature set of xxx-K419)
R&S®CMW-KW590	LTE MTC (eMTC feature set of xxx-K415)
R&S®CMW-KW6000	5G NR (same feature set as xxx-K444)
R&S®CMW-KW610	Bluetooth® (same feature set as xxx-K260)
R&S®CMW-KW620	GPS (1 satellite, same feature set as xxx-K244 and xxx-K298)
R&S®CMW-KW621	GLONASS (1 satellite, same feature set as xxx-K294)

R&S®CMW-KW622	Galileo (1 satellite, same feature set as xxx-K266)
R&S®CMW-KW623	BeiDou (1 satellite, same feature set as xxx-K407)
R&S®CMW-KW630	DVB (same feature set as xxx-K252)
R&S®CMW-KW632	DAB (same feature set as xxx-K253)
R&S®CMW-KW650	WLAN IEEE 802.11a/b/g/n/j/p (same feature set as xxx-K254)
R&S®CMW-KW656	WLAN IEEE 802.11ac (same feature set as xxx-K286)
R&S®CMW-KW657	WLAN IEEE 802.11ax (same feature set as xxx-K442)
R&S®CMW-KW683	LoRa (same feature set as xxx-K431)
R&S®CMW-KW750	TD-SCDMA (same feature set as xxx-K250)
R&S®CMW-KW751	TD-SCDMA enhanced (same feature set as xxx-K251)
R&S®CMW-KW800	CDMA2000 (same feature set as xxx-K246)
R&S®CMW-KW880	1xEV-DO Rev. A (same feature set as xxx-K247)

A subset of R&S®WiniQSIM2 options is supported for the R&S®CMW290.

R&S®CMW-KW010	AWGN (same feature set as xxx-K262)
R&S®CMW-KW200	GSM/EDGE (same feature set as xxx-K240)
R&S®CMW-KW201	EDGE Evolution (same feature set as xxx-K241)
R&S®CMW-KW400	WCDMA (same feature set as xxx-K242)
R&S®CMW-KW401	HSDPA (same feature set as xxx-K243)
R&S®CMW-KW402	HSUPA (same feature set as xxx-K245)
R&S®CMW-KW403	WCDMA Release 7 HSPA+ (same feature set as xxx-K259)
R&S®CMW-KW500	LTE (same feature set as xxx-K255)
R&S®CMW-KW610	Bluetooth® (same feature set as xxx-K260)
R&S®CMW-KW620	GPS (1 satellite, same feature set as xxx-K244 and xxx-K298)
R&S®CMW-KW621	GLONASS (1 satellite, same feature set as xxx-K294)
R&S®CMW-KW622	Galileo (1 satellite, same feature set as xxx-K266)
R&S®CMW-KW623	BeiDou (1 satellite, same feature set as xxx-K407)
R&S®CMW-KW630	DVB (same feature set as xxx-K252)
R&S®CMW-KW650	WLAN IEEE 802.11a/b/g/n/j/p (same feature set as xxx-K254)
R&S®CMW-KW656	WLAN IEEE 802.11ac (same feature set as xxx-K286)
R&S®CMW-KW657	WLAN IEEE 802.11ax (same feature set as xxx-K442)
R&S®CMW-KW750	TD-SCDMA (same feature set as xxx-K250)
R&S®CMW-KW751	TD-SCDMA enhanced (same feature set as xxx-K251)
R&S®CMW-KW800	CDMA2000 (same feature set as xxx-K246)
R&S®CMW-KW880	1xEV-DO Rev. A (same feature set as xxx-K247)

A subset of R&S®WiniQSIM2 options is supported for the R&S®CMW270.

R&S®CMW-KW010	AWGN (same feature set as xxx-K262)
R&S®CMW-KW610	Bluetooth® (same feature set as xxx-K260)
R&S®CMW-KW620	GPS (1 satellite, same feature set as xxx-K244 and xxx-K298)
R&S®CMW-KW621	GLONASS (1 satellite, same feature set as xxx-K294)
R&S®CMW-KW622	Galileo (1 satellite, same feature set as xxx-K266)
R&S®CMW-KW623	BeiDou (1 satellite, same feature set as xxx-K407)
R&S®CMW-KW630	DVB (same feature set as xxx-K252)
R&S®CMW-KW650	WLAN IEEE 802.11a/b/g/n/j/p (same feature set as xxx-K254)
R&S®CMW-KW656	WLAN IEEE 802.11ac (same feature set as xxx-K286)
R&S®CMW-KW657	WLAN IEEE 802.11ax (same feature set as xxx-K442)
R&S®CMW-KW683	LoRa (same feature set as xxx-K431)

A subset of R&S®WiniQSIM2 options is supported for the CMA.

R&S®CMA-KW620	GPS test (1 satellite, same feature set as xxx-K244 and xxx-K298)
R&S®CMA-KW621	GLONASS test (1 satellite, same feature set as xxx-K294)
R&S®CMA-KW622	Galileo test (1 satellite, same feature set as xxx-K266)
R&S®CMA-KW668	TETRA Release 2 (same feature set as xxx-K268)

Specifications

Digital modulation systems

See "Digital Standards for Signal Generators" specifications (PD 5213.9434.22).

The specified data applies together with the parameters of the relevant standard.

Note that the given parameter ranges may be additionally restricted due to inter-parameter dependencies.

Navigation standards

See "GNSS and Avionics Simulation for Rohde & Schwarz Signal Generators" specifications (PD 3607.6896.22).

General data

Supported operating systems

Administrator rights are necessary for installation.

Windows 10		version 1607 "Anniversary Edition" and later
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Remote control of R&S®WinIQSIM2

Systems	remote control via Ethernet	local host, Ethernet
Command set		SCPI 1999.5

Remote control of instruments from R&S®WinIQSIM2

Interfaces		Ethernet, USB, IEC/IEEE bus
VISA runtime library	required, depending on the manufacturer of the instrument to be controlled	
	National Instruments	v3.4 or higher
	Agilent Technologies/ Keysight Technologies	v14.0 or higher
Command set		SCPI 1999.5
IEC/IEEE bus address		0 to 30

Ordering information

Designation	Type	Order No.
Simulation software	R&S®WinIQSIM2	1405.7061.00
VISA driver (already included in the R&S®SMW-B10/-B9, R&S®SMM-B9, R&S®SMBVB-K520 and R&S®SGT-K510 device options)	VISA I/O library	1161.8473.02
Digital standards for vector signal generators		
See "Digital Standards for Signal Generators" specifications (PD 5213.9434.22) and "GNSS and Avionics Simulation for Rohde & Schwarz Signal Generators" specifications (PD 3607.6896.22).		
Digital standards for performance vector testers		
See specifications of the respective instrument: PVT360A (PD 3683.6212.22)		
Digital standards for radio communication testers		
See specifications of the respective instrument:		
<ul style="list-style-type: none"> • CMA (PD 3606.9404.22) • CMP180 (PD 3609.7348.22) • CMP200 (PD 5216.4391.22) • CMW500, R&S®CMW290 and R&S®CMW270 (PD 5213.9211.22) • CMX500 (PD 5216.4127.22) 		

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