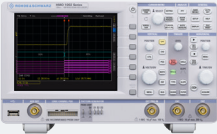

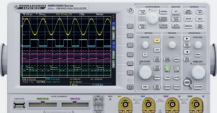
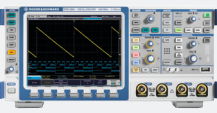


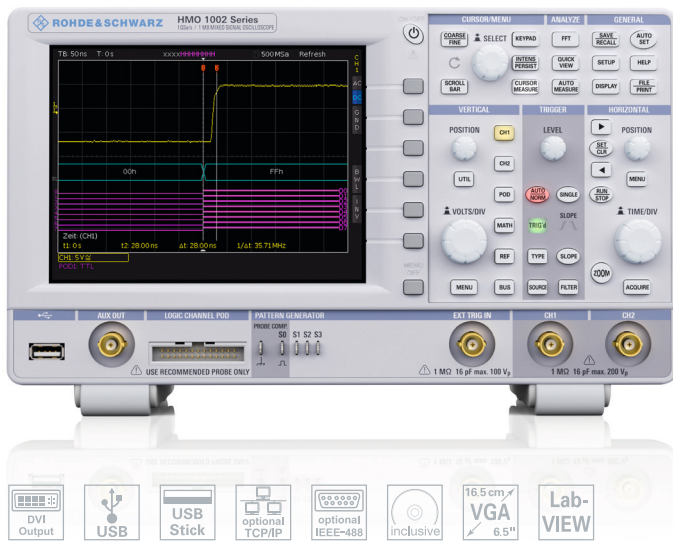


Oscilloscopes

Type/designation	Bandwidth (-3 dB)	Number of channels	Max. sampling rate (realtime)	Memory depth	Input sensitivity
R&S®HMO1002 digital oscilloscope 	<ul style="list-style-type: none"> ┆ 50 MHz ┆ 70 MHz ┆ 100 MHz 	<ul style="list-style-type: none"> ┆ 2 channels 	<ul style="list-style-type: none"> ┆ 512 Msample/s per channel ┆ 1 Gsample/s interleaved 	<ul style="list-style-type: none"> ┆ 512 ksample per channel ┆ 1 Msample interleaved 	<ul style="list-style-type: none"> ┆ 1 MΩ: 1 mV/div to 10 V/div
	with MSO probe option: 350 MHz	8 digital channels	512 Msample/s	512 ksample	
HMO compact digital oscilloscope 	<ul style="list-style-type: none"> ┆ 70 MHz ┆ 100 MHz ┆ 150 MHz ┆ 200 MHz 	<ul style="list-style-type: none"> ┆ 2 channels ┆ 4 channels 	<ul style="list-style-type: none"> ┆ 1 Gsample/s per channel ┆ 2 Gsample/s interleaved 	<ul style="list-style-type: none"> ┆ 1 Msample per channel ┆ 2 Msample interleaved 	<ul style="list-style-type: none"> ┆ 50 Ω: 1 mV/div to 10 V/div ┆ 1 MΩ: 1 mV/div to 10 V/div
	with MSO probe option: 350 MHz	8 digital channels	1 Gsample/s	1 Msample	
HMO3000 digital oscilloscope 	<ul style="list-style-type: none"> ┆ 300 MHz ┆ 400 MHz ┆ 500 MHz 	<ul style="list-style-type: none"> ┆ 2 channels ┆ 4 channels 	<ul style="list-style-type: none"> ┆ 2 Gsample/s per channel ┆ 4 Gsample/s interleaved ┆ 1 Gsample/s (logic channels) 	<ul style="list-style-type: none"> ┆ 4 Msample per channel ┆ 8 Msample interleaved 	<ul style="list-style-type: none"> ┆ 50 Ω: 1 mV/div to 5 V/div ┆ 1 MΩ: 1 mV/div to 5 V/div
	with MSO probe option: 350 MHz	16 digital channels	1 Gsample/s	4 Msample	
R&S®RTM2000 digital oscilloscope 	<ul style="list-style-type: none"> ┆ 350 MHz ┆ 500 MHz 	<ul style="list-style-type: none"> ┆ 2 channels ┆ 4 channels 	<ul style="list-style-type: none"> ┆ 2.5 Gsample/s per channel ┆ 5 Gsample/s interleaved 	<ul style="list-style-type: none"> ┆ 10 Msample per channel ┆ 20 Msample interleaved 	<ul style="list-style-type: none"> ┆ 50 Ω: 1 mV/div to 1 V/div ┆ 1 MΩ: 1 mV/div to 10 V/div
	with MSO option: 400 MHz	16 digital channels	up to 5 Gsample/s	up to 20 Msample	
R&S®RTE digital oscilloscope 	<ul style="list-style-type: none"> ┆ 200 MHz ┆ 350 MHz ┆ 500 MHz ┆ 1 GHz 	<ul style="list-style-type: none"> ┆ 2 channels ┆ 4 channels 	<ul style="list-style-type: none"> ┆ 5 Gsample/s per channel 	<ul style="list-style-type: none"> ┆ 10 Msample per channel ┆ Optionally up to 50 Msample per channel 	<ul style="list-style-type: none"> ┆ 50 Ω: 1 mV/div to 1 V/div ┆ 1 MΩ: 1 mV/div to 10 V/div
	with MSO option: 400 MHz	16 digital channels	5 Gsample/s	100 Msample	
R&S®RTO digital oscilloscope 	<ul style="list-style-type: none"> ┆ 600 MHz ┆ 1 GHz ┆ 2 GHz ┆ 4 GHz 	<ul style="list-style-type: none"> ┆ 2 channels ┆ 4 channels 	<ul style="list-style-type: none"> ┆ 5 Gsample/s ┆ max. 20 Gsample/s per channel 	<ul style="list-style-type: none"> ┆ 20 Msample per channel ┆ Optionally up to 100 Msample per channel 	<ul style="list-style-type: none"> ┆ 50 Ω: 1 mV/div to 1 V/div ┆ 1 MΩ: 1 mV/div to 10 V/div
	with MSO option: 400 MHz	16 digital channels	5 Gsample/s	200 Msample	
Oscilloscope probes	▷ page 26				

R&S®HMO1002 Digital Oscilloscope



Key facts

- 1 Gsample/s sampling rate, 1 Msample memory depth
- High vertical sensitivity down to 1 mV/div
- High acquisition rate to identify signal faults
- Mixed signal function as standard
- Serial bus analysis: hardware-based triggering and decoding
- The right signal at hand: pattern generator up to 50 Mbit/s and function generator up to 50 kHz
- Voltmeter measurements using an oscilloscope
- Wide selection of automatic measurement functions
- QuickView: key results at the push of a button
- FFT: the easy way to analyze the signal spectrum
- HV110: analysis of I²C, SPI and RS-232/UART signals on analog and logic channels
- HV111: analysis of I²C and RS-232/UART signals on all analog channels
- HV112: analysis of CAN and LIN signals on analog and logic channels

Scope of the art with 50/70/100 MHz bandwidth

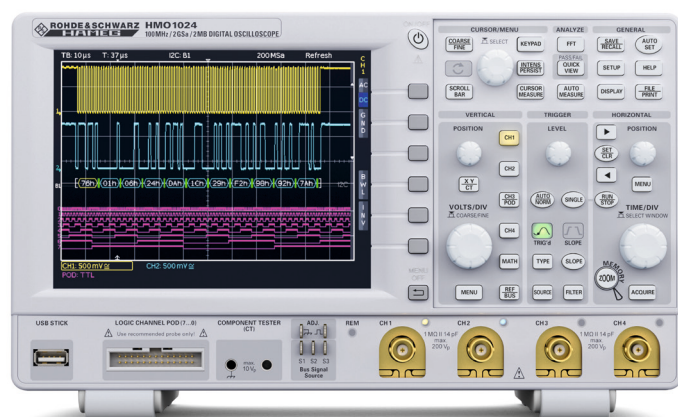
High sensitivity, multifunctionality and a great price – that is what makes the R&S®HMO1002 digital oscilloscope so special. With its wide range of functions the R&S®HMO1002 addresses a broad group of users from embedded developers to service technicians to educators. Advanced, powerful technology in a fanless design meets the high requirements of today's customers. The R&S®HMO1002 digital oscilloscope includes a wide range of upgrade options, providing true investment protection for the future.

Models/options

Designation	Type
Digital Oscilloscope, 50 MHz bandwidth, 2 channels	R&S®HMO1002
Digital Oscilloscope, 70 MHz bandwidth, 2 channels	R&S®HMO1002 + R&S®HV572
Digital Oscilloscope, 100 MHz bandwidth, 2 channels	R&S®HMO1002 + R&S®HV512

Application	How the R&S®HMO1002 meets your needs
Engineering lab	<ul style="list-style-type: none"> ■ Digital pattern generator with standard bus signals and ARB editor ■ Automeasurement function for 28 different parameters ■ Powerful zoom function ■ Fanless design
Analog circuit design	<ul style="list-style-type: none"> ■ Sensitivity down to 1 mV/div ■ Simultaneous voltmeter measurements on both analog channels ■ Component tester ■ FFT with 128k points
Embedded debugging	<ul style="list-style-type: none"> ■ Mixed signal function with 8 logic channels ■ Hardware-accelerated triggering and decoding of serial buses ■ Pass/fail tests based on user-defined masks with error signal output ■ 5-digit hardware counter
Education	<ul style="list-style-type: none"> ■ Function generator with all common waveforms ■ Education mode

HMO Compact Digital Oscilloscope



Digital mixed signal oscilloscope

- 2 Gsample/s realtime sampling rate, low-noise flash A/D converter
- 2 Mpoint memory, zoom up to 50 000:1
- MSO functionality included as standard (HO3508 logic probe required)
- Component tester for capacitors, inductors and semiconductors
- Vertical sensitivity down to 1 mV/div
- Trigger modes: slope (A/B), pulse width, video, logic, serial buses (optional)

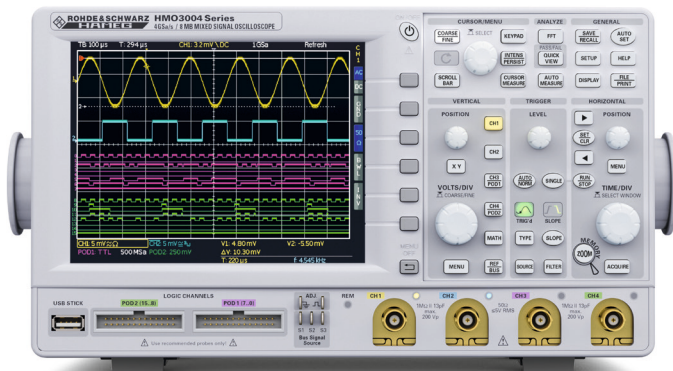
- Serial bus trigger and hardware-accelerated decode including list view options: I²C+SPI+RS-232/UART (HOO10/HOO11), CAN+LIN (HOO12)
- 28 automeasurement parameters plus statistics, formula editor, ratio cursor
- Six-digit hardware counter
- FFT up to 64k points (dBm, dBV, V (RMS))
- Pass/fail tests based on masks
- Automatic search for user-defined events
- Display: 12-div x-axis, 20-div y-axis (VirtualScreen)
- 2 × USB for mass storage, RS-232/USB dual interface for remote control

Models/options

Designation	Type
70 MHz Two/Four-Channel Mixed Signal Oscilloscope	HMO722/HMO724
100 MHz Two/Four-Channel Mixed Signal Oscilloscope	HMO1022/ HMO1024
150 MHz Two/Four-Channel Mixed Signal Oscilloscope	HMO1522/ HMO1524
200 MHz Two/Four-Channel Mixed Signal Oscilloscope	HMO2022/ HMO2024
Analysis of I ² C, SPI and RS-232/UART Signals on analog and logic channels (two buses can be analyzed at the same time)	HOO10
Analysis of I ² C, SPI and RS-232/UART Signals on all analog channels (only one bus available for analysis)	HOO11
Analysis of CAN and LIN Signals on analog and logic channels for two buses	HOO12
Dual Ethernet/USB Interface	HO730
IEEE-488 (GPIB) Interface, galvanically isolated	HO740

Application	How the HAMEG HMO meets your needs
Engineering lab	<ul style="list-style-type: none"> Advanced math functions available as standard, math on math possible Automeasurement for 28 user-defined parameters Memory zoom function up to 50 000:1
Analog circuit design	<ul style="list-style-type: none"> Low-noise amplifier and A/D converter 1 mV/div sensitivity 50 Ω/1 MΩ input impedance, switchable (HMO152x, HMO202x) Component tester
Embedded debugging	<ul style="list-style-type: none"> Mixed signal option (MSO) with 8 logic channels Optional serial bus trigger and hardware-accelerated decode 6-digit hardware counter FFT with 64k points
Production environment	<ul style="list-style-type: none"> Remote control for automated data acquisition Pass/fail tests based on user-defined masks with error signal output Automatic signal measurement at the push of a button RS-232/USB, Ethernet or GPIB (IEEE-488) interfaces
General purpose and education	<ul style="list-style-type: none"> Fast boot time; compact and lightweight design Low-noise, intelligent temperature management Extended display size through VirtualScreen technology

HMO3000 Digital Oscilloscope



Digital mixed signal oscilloscope

- 4 Gsample/s realtime sampling rate, low-noise flash A/D converter
- 8 Mpoint memory, zoom up to 200 000:1
- Automatically or manually adjustable memory depth
- Segmented memory option (H0014)
- MSO functionality included as standard (H03508/H03516 logic probe required)
- Vertical sensitivity down to 1 mV/div
- Trigger modes: slope (A/B), pulse width, video, logic, serial buses (optional), hold-off

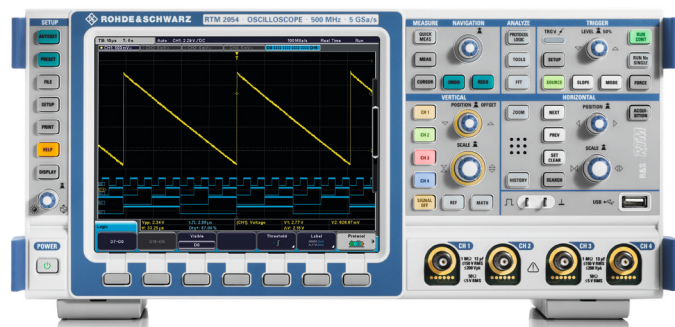
- Serial bus trigger and hardware-accelerated decode including list view options: I²C+SPI+RS-232/UART (H0010/H0011), CAN+LIN (H0012)
- 28 automeasurement parameters plus statistics, formula editor, ratio cursor
- Six-digit hardware counter
- FFT up to 64k points (dBm, dBV, V (RMS))
- Pass/fail tests based on masks
- Automatic search for user-defined events
- Display: 12-div x-axis, 20-div y-axis (VirtualScreen)
- 2 x USB for mass storage, Ethernet/USB dual interface for remote control

Models/options

Designation	Type
300 MHz Two/Four-Channel Mixed Signal Oscilloscope	HMO3032/ HMO3034
400 MHz Two/Four-Channel Mixed Signal Oscilloscope	HMO3042/ HMO3044
500 MHz Two/Four-Channel Mixed Signal Oscilloscope	HMO3052/ HMO3054
Analysis of I ² C, SPI and RS-232/UART Signals on analog and logic channels (two buses can be analyzed at the same time)	H0010
Analysis of I ² C, SPI and RS-232/UART Signals on all analog channels (only one bus available for analysis)	H0011
Analysis of CAN and LIN Signals on analog and logic channels for two buses	H0012
Segmented Memory Option	H0014
Bandwidth Upgrade from 300 MHz to 500 MHz for two/four-channel models	H00352/H00354
Bandwidth Upgrade from 400 MHz to 500 MHz for two/four-channel models	H00452/H00454

Application	How the HAMEG HMO3000 meets your needs
Engineering lab	<ul style="list-style-type: none"> Adjustable memory depth Advanced math functions available as standard, math on math possible Automeasurement for 28 user-defined parameters Segmented memory option
Analog circuit design	<ul style="list-style-type: none"> Low-noise amplifier and A/D converter 1 mV/div sensitivity 50 Ω/1 MΩ input impedance, switchable Bandwidth upgrades via software options
Embedded debugging	<ul style="list-style-type: none"> Mixed signal option (MSO) with 16 logic channels Optional serial bus trigger and hardware-accelerated decode 6-digit hardware counter FFT with 64k points
Production environment	<ul style="list-style-type: none"> Remote control for automated data acquisition Pass/fail tests based on user-defined masks with error signal output Automatic signal measurement at the push of a button RS-232/USB, Ethernet or GPIB (IEEE-488) interfaces
General purpose and education	<ul style="list-style-type: none"> Fast boot time Low-noise, intelligent temperature management Extended display size through VirtualScreen technology DVI-D output for external display

R&S®RTM2000 Digital Oscilloscope



Scope of the art: compact, precise, versatile

Ease of use, combined with fast and reliable results, is precisely what users expect from an everyday oscilloscope. Rohde & Schwarz has the solution: the R&S®RTM2000. Users can now work with two screens in one, quickly access important functions, evaluate results – while other oscilloscopes are still booting up – and see signals otherwise lost in the noise.

Key facts

- ▮ 350 MHz or 500 MHz bandwidth, up to 5 Gsample/s sampling rate, up to 20 Msample memory depth
- ▮ Two-channel and four-channel models
- ▮ Excellent measurement accuracy due to low-noise frontends

- ▮ Input sensitivity down to 1 mV/div at full bandwidth
- ▮ Fast time to results: switch on, measure and done
- ▮ High-resolution XGA display
- ▮ QuickMeas: key results at the push of a button
- ▮ Extensive cursor-based measurement functions
- ▮ Two displays instead of one: VirtualScreen
- ▮ Multilingual: choice of nine languages
- ▮ Triggering and decoding of serial protocols: I²C, SPI, RS-232/UART, I²S, CAN/LIN and MIL-STD-1553
- ▮ Automated power measurement option
- ▮ 16 digital channels with the R&S®RTM-B1 MSO option
- ▮ High-performance probes with extensive accessories

Models/options

Designation	Type
Digital Oscilloscope, 350 MHz, 2 channels	R&S®RTM2032
Digital Oscilloscope, 350 MHz, 4 channels	R&S®RTM2034
Digital Oscilloscope, 500 MHz, 2 channels	R&S®RTM2052
Digital Oscilloscope, 500 MHz, 4 channels	R&S®RTM2054
Options	
Mixed Signal Option, 400 MHz	R&S®RTM-B1
GPIB Interface	R&S®RTM-B10
Bandwidth Upgrade from 350 MHz to 500 MHz	R&S®RTM-B200
I ² C/SPI Serial Triggering and Decoding	R&S®RTM-K1
RS-232/UART Serial Triggering and Decoding	R&S®RTM-K2
CAN/LIN Serial Triggering and Decoding	R&S®RTM-K3
I ² S/LJ/RJ/TDM Serial Triggering and Decoding	R&S®RTM-K5
MIL-STD-1553 Serial Triggering and Decoding	R&S®RTM-K6
History and Segmented Memory	R&S®RTM-K15
Power Analysis	R&S®RTM-K31

Application	How the R&S®RTM2000 meets your needs
General debugging and analysis	<ul style="list-style-type: none"> ▮ QuickMeas: key results at the push of a button ▮ Logic analysis: 20 Msample with 5 Gsample/s for detailed analysis of digital signals ▮ Extensive cursor-based measurements ▮ Versatile selection of signal acquisition modes ▮ “Smooth” mode for smoothing nonperiodic signals ▮ Extensive triggering options for keeping track of important signal events ▮ Intuitive user interface for highest efficiency ▮ Two displays instead of one: VirtualScreen ▮ Active probes with innovative features, e.g. micro button and R&S®ProbeMeter ▮ Low weight; compact lab instrument
Signal validation	<ul style="list-style-type: none"> ▮ Lowest noise floor in its class: excellent measurement accuracy ▮ Full bandwidth even at an amplitude range of 1 mV/div enables true representation of weak signals ▮ No crosstalk due to good channel-to-channel isolation ▮ Active probes with premium specifications
Production testing	<ul style="list-style-type: none"> ▮ Comprehensive set of automated measurement functions ▮ Remote interface covering complete function set of instrument ▮ Installation in standard 19" racks possible
Service, maintenance and education	<ul style="list-style-type: none"> ▮ Ideal for general-purpose measurements ▮ Simple operation; lightweight and portable ▮ Short start-up time
Embedded design	<ul style="list-style-type: none"> ▮ Advanced trigger and decode (I²C, SPI, RS-232, UART, audio) options ▮ Logic analysis: 20 Msample with 5 Gsample/s for detailed analysis of digital signals

R&S® RTE Digital Oscilloscope



Key facts

- Bandwidths from 200 MHz to 1 GHz, 5 Gsample/s sampling rate, up to 40 Msample standard memory
- Two-channel and four-channel models
- Full bandwidth even at 1 mV/div
- Single-core ADC delivers ENOB of > 7 bit
- Up to 1 million waveforms/s even when performing measurements and analysis
- Industry best trigger jitter: < 1 ps (RMS)
- QuickMeas: key measurement results at the push of a button
- Fingertip zoom: signal details at your fingertip
- Triggering and decoding of serial protocols: I²C/SPI, RS-232/UART, CAN/LIN, FlexRay™, I²S/LJ/RJ/TDM, MIL-STD-1553, ARINC 429
- Automated power measurement option
- Mixed signal analysis with R&S® RTE-B1 mixed signal option

Scope of the art: easy, powerful, simply more scope

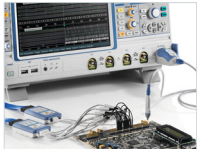
More confidence in your measurements, more tools and fast results, more fun to use – that’s the R&S® RTE digital oscilloscope. From embedded design development to power electronics analysis to general debugging, the R&S® RTE offers quick solutions for everyday test and measurement tasks.

Models/options

Designation	Type
Digital Oscilloscope, 200 MHz, 2 channels	R&S® RTE1022
Digital Oscilloscope, 200 MHz, 4 channels	R&S® RTE1024
Digital Oscilloscope, 350 MHz, 2 channels	R&S® RTE1032
Digital Oscilloscope, 350 MHz, 4 channels	R&S® RTE1034
Digital Oscilloscope, 500 MHz, 2 channels	R&S® RTE1052
Digital Oscilloscope, 500 MHz, 4 channels	R&S® RTE1054
Digital Oscilloscope, 1 GHz, 2 channels	R&S® RTE1102
Digital Oscilloscope, 1 GHz, 4 channels	R&S® RTE1104

Application	How the R&S® RTE meets your needs
Embedded design and debugging	<ul style="list-style-type: none"> ■ High acquisition rate to identify rare signal faults quickly ■ Innovative trigger system for high accuracy and trigger flexibility ■ Hardware-accelerated measurement and analysis functions (e.g. histogram, mask testing) ■ QuickMeas: key measurement results at the push of a button ■ History function: looking back in time ■ Mask test: settings in only seconds ■ Powerful and user-friendly FFT-based spectrum analysis: ideal for time-frequency correlated measurements and EMI debugging ■ Triggering and decoding for I²C/SPI, RS-232/UART, CAN/LIN, FlexRay™, I²S/LJ/RJ/TDM, MIL-STD-1553, ARINC 429 ■ Mixed signal analysis option ■ Power measurements for SMPS and DC/DC converters with power analysis software ■ Intuitive user interface for most efficient work ■ Active probes with innovative features such as micro button and R&S® ProbeMeter ■ Low weight; lowest acoustic noise; compact lab instrument
Signal validation	<ul style="list-style-type: none"> ■ High signal fidelity provides additional measurement margin ■ Digital trigger for lowest trigger jitter in realtime ■ Full bandwidth even at an amplitude range of 1 mV/div enables true representation of weak signals ■ No crosstalk due to good channel-to-channel isolation ■ Active probes with premium specifications
Production test	<ul style="list-style-type: none"> ■ Comprehensive set of automated measurement functions ■ Remote interface covering complete function set of instrument ■ Mask test: settings in only seconds ■ Installation in standard 19" racks possible
Service, maintenance and education	<ul style="list-style-type: none"> ■ Ideal for general-purpose debugging ■ Straightforward, smart user guidance ■ Fast access to important tools ■ Lightweight and portable

Options

Designation	Type
Mixed Signal Option, 400 MHz	R&S®RTE-B1
	
GPIB Interface	R&S®RTE-B10
Replacement SSD Hard Disk, incl. firmware	R&S®RTE-B18
Replacement Hard Disk, incl. firmware	R&S®RTE-B19
Memory Upgrade, 20 Msample per channel	R&S®RTE-B101
Memory Upgrade, 50 Msample per channel	R&S®RTE-B102
Bandwidth upgrades	
Upgrade of the R&S®RTE1022/4 to 350 MHz bandwidth, incl. calibration	R&S®RTE-B200
Upgrade of the R&S®RTE1022/4 to 500 MHz bandwidth, incl. calibration	R&S®RTE-B201
Upgrade of the R&S®RTE1022/4 to 1 GHz bandwidth, incl. calibration	R&S®RTE-B202
Upgrade of the R&S®RTE1032/4 to 500 MHz bandwidth, incl. calibration	R&S®RTE-B204
Upgrade of the R&S®RTE1032/4 to 1 GHz bandwidth, incl. calibration	R&S®RTE-B205
Upgrade of the R&S®RTE1052/4 to 1 GHz bandwidth, incl. calibration	R&S®RTE-B207
I ² C/SPI Triggering and Decoding	R&S®RTE-K1
RS-232/UART Serial Decoding	R&S®RTE-K2
CAN/LIN Triggering and Decoding	R&S®RTE-K3
FlexRay™ Triggering and Decoding	R&S®RTE-K4
I ² S/LJ/RJ/TDM Serial Triggering and Decoding	R&S®RTE-K5
MIL-STD-1553 Serial Triggering and Decoding	R&S®RTE-K6
ARINC 429 Serial Triggering and Decoding	R&S®RTE-K7
Power Analysis	R&S®RTE-K31
Front Cover, for R&S®RTO/RTE digital oscilloscopes	R&S®RTO-Z1
Soft Case, for R&S®RTO/RTE digital oscilloscopes and accessories	R&S®RTO-Z3
Transit Case, with trolley function, for R&S®RTO/RTE digital oscilloscopes and accessories	R&S®RTO-Z4
Probe Pouch, for R&S®RTO/RTE digital oscilloscopes	R&S®RTO-Z5
19" Rackmount Kit, for R&S®RTO/RTE digital oscilloscopes with 6 HU	R&S®ZZA-RTO

R&S®RTO Digital Oscilloscope



Scope of the art: created to be unique

The R&S®RTO oscilloscopes combine excellent signal fidelity, high acquisition rate and the world's first realtime digital trigger system with a compact device format in the 600 MHz to 4 GHz class.


Key facts

- ▮ 600 MHz, 1 GHz, 2 GHz, 4 GHz bandwidth, up to 20 Gsample/s sampling rate, up to 80 Msample standard memory depth
- ▮ Two-channel and four-channel models
- ▮ Low-noise frontend – best in its class
- ▮ Full bandwidth even at 1 mV/div
- ▮ Single-core ADC delivers industry best ENOB of > 7 bit
- ▮ 1 million waveforms/s even when performing measurements and analysis
- ▮ Hardware-accelerated measurements
- ▮ Industry best trigger jitter: < 1 ps (RMS)
- ▮ Triggering and decoding of serial protocols: I²C, SPI, RS-232, UART, CAN, LIN, FlexRay™, audio, MIL and ARINC
- ▮ Mixed signal analysis with R&S®RTO-B1 MSO option
- ▮ Compliance testing for USB 2.0, 10/100/1000BaseT and 10GBaseT Ethernet
- ▮ Jitter analysis
- ▮ Software interface for acquisition and downconversion of I/Q data

Models	
Designation	Type
Digital Oscilloscope, 600 MHz, 2 channels	R&S®RTO1002
Digital Oscilloscope, 600 MHz, 4 channels	R&S®RTO1004
Digital Oscilloscope, 1 GHz, 2 channels	R&S®RTO1012
Digital Oscilloscope, 1 GHz, 4 channels	R&S®RTO1014
Digital Oscilloscope, 2 GHz, 2 channels	R&S®RTO1022
Digital Oscilloscope, 2 GHz, 4 channels	R&S®RTO1024
Digital Oscilloscope, 4 GHz, 4 channels	R&S®RTO1044

Application	How the R&S®RTO meets your needs
Embedded design and debugging	<ul style="list-style-type: none"> ▮ High acquisition rate to identify rare signal faults fast ▮ Innovative trigger system for high accuracy and trigger flexibility ▮ Hardware-accelerated measurement and analysis functions (e.g. histogram, mask testing) ▮ Full vertical resolution of ADC for multiple waveforms thanks to multigrid display ▮ Advanced triggering and decoding (I²C, SPI, RS-232, UART, audio, MIL, ARINC) option ▮ Mixed signal analysis ▮ Powerful and user-friendly FFT-based spectrum analysis: ideal for time-frequency correlated measurements and EMI debugging ▮ Advanced power measurements for SMPS and DC/DC converters with power analysis software ▮ History view function ▮ Intuitive user interface for most efficient work ▮ Active probes with innovative features such as micro button and R&S®ProbeMeter ▮ Low weight; lowest acoustic noise; compact lab instrument
Signal validation	<ul style="list-style-type: none"> ▮ High signal fidelity provides additional measurement margin ▮ Digital trigger for lowest trigger jitter in realtime ▮ Lowest noise floor in its class ▮ Active probe with premium specifications ▮ Full bandwidth also for amplitude ranges ≤ 10 mV/div enables true representation of weak signals ▮ Jitter option ▮ Compliance test software for USB 2.0, 10/100/1000BaseT Ethernet and 10GBaseT Ethernet
Automotive electronics	<ul style="list-style-type: none"> ▮ High signal fidelity for trustable measurement results ▮ Advanced trigger and decode option for CAN/LIN/FlexRay™ interfaces ▮ High acquisition rate to identify rare signal faults fast
Manufacturing test	<ul style="list-style-type: none"> ▮ Comprehensive set of automated measurement functions ▮ Fast remote interface covers complete function set of instrument ▮ Installation in standard 19" racks possible; LXI class C support

Options

Designation	Type
Mixed Signal Option, 400 MHz, scope of the art	R&S®RTO-B1
	
OCXO 10 MHz	R&S®RTO-B4
GPIB Interface	R&S®RTO-B10
Solid State Disk (Windows XP)	R&S®RTO-B18
Solid State Disk (Windows 7)	R&S®RTO-B18
Replacement Hard Disk incl. firmware (Windows 7)	R&S®RTO-B19
Windows 7 Upgrade Kit	R&S®RTO-U1
Memory Upgrade, 50 Msample per channel	R&S®RTO-B101
Memory Upgrade, 100 Msample per channel	R&S®RTO-B102
Bandwidth upgrades ¹⁾	
Upgrade of the R&S®RTO1002/4 to 1 GHz bandwidth, incl. calibration	R&S®RTO-B200
Upgrade of the R&S®RTO1002/4 to 2 GHz bandwidth, incl. calibration	R&S®RTO-B201
Upgrade of the R&S®RTO1004 to 4 GHz bandwidth, incl. calibration	R&S®RTO-B202
Upgrade of the R&S®RTO1012/4 to 2 GHz bandwidth, incl. calibration	R&S®RTO-B203
Upgrade of the R&S®RTO1014 to 4 GHz bandwidth, incl. calibration	R&S®RTO-B204
Upgrade of the R&S®RTO1024 to 4 GHz bandwidth, incl. calibration	R&S®RTO-B205
I ² C/SPI Triggering and Decoding	R&S®RTO-K1
RS-232/UART Serial Decoding	R&S®RTO-K2
CAN/LIN Triggering and Decoding	R&S®RTO-K3
FlexRay™ Triggering and Decoding	R&S®RTO-K4
I ² S/LJ/RJ/TDM Serial Triggering and Decoding	R&S®RTO-K5
MIL-STD-1553 Serial Triggering and Decoding	R&S®RTO-K6
ARINC 429 Serial Triggering and Decoding	R&S®RTO-K7
I/Q Software Interface	R&S®RTO-K11
Jitter Analysis	R&S®RTO-K12
Clock Data Recovery	R&S®RTO-K13
USB 2.0 Compliance Test Software	R&S®RTO-K21
Ethernet Compliance Test	R&S®RTO-K22
10G Ethernet Compliance Test	R&S®RTO-K23
BroadR-Reach Compliance Test	R&S®RTO-K24
Power Analysis	R&S®RTO-K31
Front Cover, for R&S®RTO digital oscilloscopes	R&S®RTO-Z1
Soft Case, for R&S®RTO digital oscilloscopes and accessories	R&S®RTO-Z3
Probe Pouch, for R&S®RTO digital oscilloscopes	R&S®RTO-Z5

¹⁾ The bandwidth upgrade is performed at a Rohde&Schwarz service center, where the oscilloscope will also be calibrated.

Oscilloscope probes

		HMO									
Scope series		1002	1002	1002	722/4	1022/4	1522/4	2022/4	3032/4	3042/4	3052/4
Model		1002	1002	1002	722/4	1022/4	1522/4	2022/4	3032/4	3042/4	3052/4
Bandwidth		50 MHz	70 MHz	100 MHz	70 MHz	100 MHz	150 MHz	200 MHz	300 MHz	400 MHz	500 MHz
Passive probes											
HZ154	10/100 MHz				■	■	○	○	○	○	○
HZ51	150 MHz	○	○	○	○	○	○	○	○	○	○
HZ52	250 MHz	○	○	○	○	○	○	○	○	○	○
HZO10	250 MHz	○	○	○	○	○	■	■	○	○	○
HZ350	350 MHz	○	○	○	○	○	○	○	■	■	○
HZ355	500 MHz	○	○	○	○	○	○	○	●	●	■
R&S®RTM-ZP10	500 MHz	○	○	○	○	○	○	○	○	○	○
R&S®RT-ZP10	500 MHz	○	○	○	○	○	○	○	○	○	○
Passive broadband probe											
R&S®RT-ZZ80	8 GHz										
Active probes: single-ended											
HZO30	1 GHz	●	●	●	●	●	●	●	●	●	●
R&S®RT-ZS10E	1 GHz										
R&S®RT-ZS10	1 GHz										
R&S®RT-ZS20	1.5 GHz										
R&S®RT-ZS30	3 GHz										
R&S®RT-ZS60	6 GHz										
Active probes: differential											
HZ109	30/40 MHz	●	●	○	●	○	○	○	○	○	○
HZO40	200 MHz	○	○	●	○	●	○	○	○	○	○
HZO41	800 MHz	○	○	○	○	○	●	●	●	●	●
R&S®RT-ZD10	1 GHz										
R&S®RT-ZD20	1.5 GHz										
R&S®RT-ZD30	3 GHz										
R&S®RT-ZD40	4.5 GHz										
High-voltage probes: single-ended											
HZ53	100:1	●	●	●	●	●	●	●	●	●	●
HZO20	1000:1	●	●	●	●	●	●	●	●	●	●
R&S®RT-ZH10	100:1	○	○	○	○	○	○	○	○	○	○
R&S®RT-ZH11	1000:1	○	○	○	○	○	○	○	○	○	○
High-voltage probes: differential											
HZ100	700 V (V_{diff})	●	●	●	●	●	●	●	●	●	●
HZ115	1000 V (V_{diff})	●	●	●	●	●	●	●	●	●	●
R&S®RT-ZD01	1000 V	○	○	○	○	○	○	○	○	○	○
Current probes											
HZO50	±20 A (RMS)	●	●	●	●	●	●	●	●	●	●
HZO51	±100 A (RMS)	●	●	●	●	●	●	●	●	●	●
R&S®RT-ZC20 ¹⁾	±30 A (RMS)	○	○	○	○	○	○	○	○	○	○
R&S®RT-ZC10 ¹⁾	±150 A (RMS)	○	○	○	○	○	○	○	○	○	○
EMC near-field probes											
R&S®HZ-15	30 MHz to 3 GHz										

- Standard delivery. One probe per oscilloscope channel.
- Recommended. Available as an option.
- Compatible. System bandwidth may be limited on probe or base unit. Manual configuration on oscilloscope may be necessary for compensation.

¹⁾ R&S®RT-ZA13 power supply necessary.



Passive probes: the allrounders for every oscilloscope.

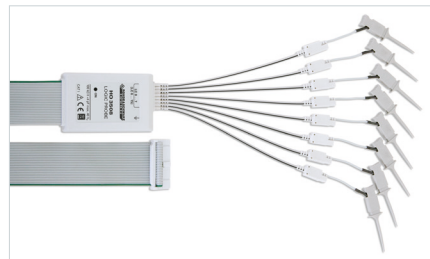
Extensive R&S®RT-ZA1 accessory set for optimal contacting.



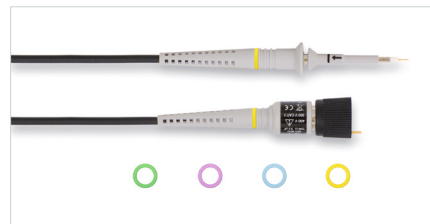
R&S®RT-ZA4 mini clips and R&S®RT-ZA5 micro clips for reliable contacting, especially when using multiple probes.



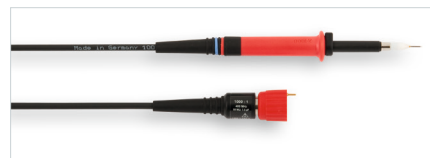
R&S®RT-ZD01 high-voltage differential probe (100 MHz, 1 kV (RMS)).



HO3508
eight-channel
logic probe
(350 MHz, 4 pF).



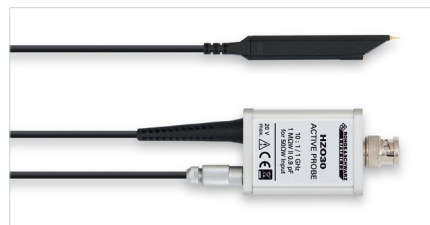
HZ355
500 MHz passive
probe 10:1
with automatic
identification.



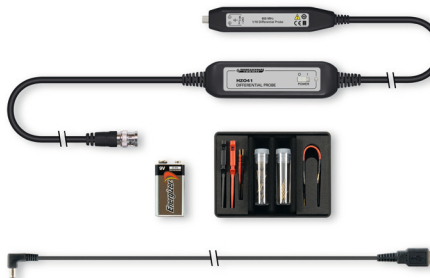
HZO20
high-voltage probe
1000:1 (400 MHz,
1 kV (RMS)).



HZO51
AC/DC current probe
(100 A/1000 A,
DC to 20 kHz).



HZO30
1 GHz active
probe (0.9 pF,
1 M Ω , including
accessories).



HZO41
800 MHz active
differential probe
(10:1, 1 pF, 200 k Ω).



Rohde & Schwarz active probes (1.0 GHz to 6.0 GHz).



R&S®RT-ZS10/20/30.



R&S®RT-ZD10/20/30.

Probe accessories

Designation	Type
Accessory Set for R&S®RT-ZP10/R&S®RTM-ZP10	R&S®RT-ZA1
Spare Accessory Set for R&S®RT-ZS10/10E/20/30	R&S®RT-ZA2
Pin Set for R&S®RT-ZS10/10E/20/30	R&S®RT-ZA3
Mini Clips	R&S®RT-ZA4
Micro Clips	R&S®RT-ZA5
Lead Set	R&S®RT-ZA6
Pin Set for R&S®RT-ZD20/30	R&S®RT-ZA7
N-Type Adapter for R&S®RT-Zxx oscilloscope probes	R&S®RT-ZA9
SMA Adapter	R&S®RT-ZA10
Probe Power Supply	R&S®RT-ZA13
External Attenuator 10:1, 2.0 GHz, 1 MΩ 1.3 pF, 70 V DC, 46 V AC (peak) for R&S®RT-ZD20/30	R&S®RT-ZA15
Power Deskew Fixture	R&S®RT-ZF20
20 dB Preamp for R&S®HZ-15	R&S®HZ-16