

# Scope of the art R&S® Scope Rider Handheld digital oscilloscope

Lab performance in a rugged  
and portable design

1 60 MHz to 500 MHz  
1 Isolated, CAT IV

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and you'll never  
look back.

  
**ROHDE & SCHWARZ**



# R&S® Scope Rider

## Experience our handheld scope for 2 minutes and you'll never look back

In the lab

Lab performance in a rugged and portable design – the perfect multipurpose tool for the lab or in the field.

7", 800 x 480 capacitive touch display

> 4 h battery life

Switch between all instrument modes

One-touch documentation: easily save screenshots and measurements



### Superior performance

- ▮ 60 MHz to 500 MHz with 5 Gsample/s sampling rate
- ▮ 50 000 waveforms per second
- ▮ 10-bit ADC
- ▮ 2 mV/div to 100 V/div
- ▮ Up to 300 V offset range
- ▮ 33 automatic measurement functions

### 5 instruments in one handheld package

- ▮ Lab performance oscilloscope
- ▮ Logic analyzer
- ▮ Protocol analyzer
- ▮ Data logger
- ▮ Digital multimeter\*



\* Additional multimeter channel in two-channel model.



**In the field**



CAT IV 600 V / CAT III 1000 V:  
galvanic-insulated floating channels

Rugged, dust and  
water resistant  
housing

Multifunction  
wheel

Unmatched  
connectivity:  
USB, Ethernet and  
wireless LAN

Large buttons,  
can be used  
with gloves

### Capacitive touch and keypad operation

- ▮ Full operation via touch panel or keypad
- ▮ See more with a 7" color display
- ▮ Easy parameter adjustment with multifunction wheel
- ▮ Large buttons for use with gloves

### Outstanding protection

- ▮ Maximum safety in all environments: CAT IV 600 V / CAT III 1000 V
- ▮ IP51 housing that meets military environmental requirements
- ▮ Nonslip and impact resistant rubberized surface

### Excellent connectivity and much more

- ▮ Wireless LAN and Ethernet for web-based remote control and quick data access
- ▮ Finish faster with one-touch documentation
- ▮ MicroSD card and USB device/host support
- ▮ More than 4 hours of battery power



# Simply better

| Model                      | R&S®Scope Rider   | Typical isolated lab oscilloscope | Typical isolated handheld oscilloscope |
|----------------------------|---|-----------------------------------|--|
| <b>Bandwidth</b>           | 60 MHz to 500 MHz at 5 Gsample/s                                  | 100 MHz to 200 MHz at 2 Gsample/s | 60 MHz to 500 MHz at 5 Gsample/s       |
| <b>A/D converter</b>       | 10 bit  | 8 bit                             | 8 bit                                  |
| <b>User interface</b>      | 7", 800 x 480 color capacitive touch, keypad, multifunction wheel | 6", 320 x 240 color, keypad       | 6", 320 x 240 color, keypad            |
| <b>Acquisition speed</b>   | 50 000 waveforms/s  | ≈200 waveforms/s                  | ≈10 waveforms/s                        |
| <b>Max. record length</b>  | 500 ksample   | 2.5 ksample                       | 10 ksample                             |
| <b>Lowpass filtering</b>   | flexible: 1 kHz to 200 MHz  | analog only: 20 MHz               | analog only: 10 kHz and 20 MHz         |
| <b>Trigger system</b>      | digital, 14 trigger types   | analog, 3 trigger types           | analog, 3 trigger types                |
| <b>Protocol decoding</b>   | trigger and decode  | none                              | none                                   |
| <b>Mixed signal option</b> | 8 digital channels  | none                              | none                                   |
| <b>Remote control</b>      | web browser based, wireless LAN or Ethernet                       | PC software required, Ethernet    | PC software required, Ethernet         |

## In the lab

The R&S®Scope Rider delivers lab performance in a portable, battery-powered package with the added benefit of isolated channels.

It is the first handheld oscilloscope with an integrated MSO (eight digital channels) and protocol analysis capability on both the analog and digital channels.

With up to 50 000 waveforms per second, it quickly uncovers rare signal faults and provides excellent responsiveness. A digital trigger system with a large set of triggering functions enables it to accurately trigger on the signal that needs to be analyzed.

Requiring only minimum bench space, the R&S®Scope Rider is the perfect tool for even complex R&D debugging tasks and also offers the flexibility required for use in the field.



## In the field

With the R&S®Scope Rider, there is no longer a need to compromise on performance when troubleshooting in the field.

It provides all the features and capabilities of today's lab oscilloscopes in a rugged and portable format, with enough battery power for a day's work.

Isolated inputs with 600 V CAT IV rating allow safe measuring in all environments. If extra safety is needed, the R&S®Scope Rider can be remotely controlled with the web browser via wireless LAN, separating the measurement location from the place where the user controls the instrument.

With five instrument modes, including an integrated multimeter\*, the R&S®Scope Rider is the perfect troubleshooting instrument for work in the field.

\*Only two-channel models



# Choose your instrument

| Configuration recommendation  |  |  |   |
|---|--|--|---|
| Application area  | Field  |  | Lab   |
|   | Electric and electromechanical installation and maintenance  | Electronic field service and maintenance   | Research and product development  |
| R&S®ScopeRider – the perfect tool for diagnostics and troubleshooting of: | <ul style="list-style-type: none"> <li>▮ Electric installations</li> <li>▮ Motors, fans and pumps</li> <li>▮ Electric drives</li> <li>▮ Sensors and transducers</li> <li>▮ Industrial machinery</li> </ul> | <ul style="list-style-type: none"> <li>▮ Robotic systems</li> <li>▮ Solar inverters</li> <li>▮ Backup power supplies</li> <li>▮ Avionic and military systems</li> <li>▮ Medical equipment</li> <li>▮ Rail vehicle systems</li> </ul> | <ul style="list-style-type: none"> <li>▮ Embedded systems</li> <li>▮ Industrial controllers</li> <li>▮ Power electronics</li> <li>▮ General electronics</li> <li>▮ Environmental testing</li> </ul> |
| <b>Industries</b>   |  |  |   |
| Automotive  |  | •  | •   |
| Aerospace and defense   | •  | •  | •   |
| Energy  | •  | •  | •   |
| Industry automation   | •  | •  | •   |
| Medical   |  | •  | •   |
| Power electronics   |  | •  | •   |
| <b>Oscilloscope Input</b>   |  |  |   |
| 2 channels + digital multimeter   | R&S®RTH1002  | R&S®RTH1002  |   |
| 4 channels  |  | R&S®RTH1004  | R&S®RTH1004   |
| <b>Bandwidth</b>  |  |  |   |
| 60, 100, 200, 350, 500 MHz models   | 60 MHz to 100 MHz  | 100 MHz to 500 MHz   | 200 MHz to 500 MHz  |
| <b>Logic (MSO) option</b>   |  |  |   |
| 8 digital channels  |  | •  | •   |
| <b>Analysis options</b>   |  |  |   |
| I <sup>2</sup> C/SPI trigger and decode                                   |  | •  | •   |
| RS232/UART trigger and decode   |  | •  | •   |
| History and segmented memory  | •  | •  | •   |
| Advanced trigger  |  |  | •   |
| Wireless LAN interface  | •  | •  | •   |
| Web interface remote control  | •  | •  | •   |
| <b>Accessories</b>  |  |  |   |
| Current probes  | •  | •  | •   |
| Car adapter   | •  | •  |   |
| Carrying case   | •  | •  |   |
| Battery charger   | •  | •  |   |

| R&S®ScopeRider model overview |                |                |                |                |                 |             |                      |
|-------------------------------|----------------|----------------|----------------|----------------|-----------------|-------------|----------------------|
| Bandwidth                     |                |                |                |                | Analog channels | Multi-meter | Logic channels (MSO) |
| 60 MHz                        | 100 MHz        | 200 MHz        | 350 MHz        | 500 MHz        |                 |             |                      |
| R&S®RTH1002                   | R&S®RTH1012    | R&S®RTH1022    | R&S®RTH1032    | R&S®RTH1052    | 2               | •           |                      |
| R&S®RTH1004                   | R&S®RTH1014    | R&S®RTH1024    | R&S®RTH1034    | R&S®RTH1054    | 4               |             |                      |
| R&S®RTH1002MSO                | R&S®RTH1012MSO | R&S®RTH1022MSO | R&S®RTH1032MSO | R&S®RTH1052MSO | 2               | •           | 8                    |
| R&S®RTH1004MSO                | R&S®RTH1014MSO | R&S®RTH1024MSO | R&S®RTH1034MSO | R&S®RTH1054MSO | 4               |             | 8                    |

## Service that adds value

- | Worldwide
- | Local and personalized
- | Customized and flexible
- | Uncompromising quality
- | Long-term dependability

## About Rohde & Schwarz

The Rohde & Schwarz electronics group offers innovative solutions in the following business fields: test and measurement, broadcast and media, secure communications, cybersecurity, radiomonitoring and radiolocation. Founded more than 80 years ago, this independent company has an extensive sales and service network and is present in more than 70 countries. The electronics group is among the world market leaders in its established business fields. The company is headquartered in Munich, Germany. It also has regional headquarters in Singapore and Columbia, Maryland, USA, to manage its operations in these regions.

## Sustainable product design

- | Environmental compatibility and eco-footprint
- | Energy efficiency and low emissions
- | Longevity and optimized total cost of ownership

Certified Quality Management

ISO 9001

Certified Environmental Management

ISO 14001

## Rohde & Schwarz GmbH & Co. KG

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PD 3607.2178.32 | Version 02.00 | October 2015 (md)

R&S® Scope Rider Handheld digital oscilloscope

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3607217832