GENERATION LEAP

About 10 years ago, Rohde & Schwarz surprised the professional world with its first digital oscilloscope, the R&S®RTO. In the meantime, the instrument has been completely renewed and updated, providing users with an all-new and redesigned R&S®RTO 6.

The R&S®RTO 6 has been enhanced with significant improvements in response to extensive customer feedback for the previous models. The new "best of midrange" instrument comes with an updated user interface, a larger display, excellent specifications and a comprehensive range of software options, providing fast, detailed insights into all types of electronic circuits better than ever.

Quick and easy measurement results

Operational efficiency in everyday measurements was a key focus in development. The most striking enhancements are a large 15.6" touch display and a new user interface. Its design successfully balances the conflicting requirements of a maximized, unobstructed viewing area for the measurements and constant access to control elements and desired functions without users having to work their way through deep menu trees. Users can arrange results on the screen as desired, using the tried and tested R&S®SmartGrid function already available in the previous model. Screenshots with the most recent oscilloscope displays can be stored as savesets and easily identified and recalled later on.

Excellent specifications for in-depth signal information

The R&S®RTO6 is based on the previous R&S®RTO series. Its key figures include a maximum bandwidth of 6 GHz, a sampling rate of 20 Gsample/s, and an unrivaled acquisition rate of up to one million waveforms per second, enabling reliable detection even of sporadic signal anomalies. Low-noise components and a highly linear A/D converter result in excellent signal integrity and up to 9.4 effective number of bits (ENOB). The unique high definition mode uses a digital filter to increase the vertical resolution to up to 16 bit, enabling very precise measurements with low noise. The patented digital trigger with adjustable hysteresis can fully utilize this high resolution to isolate even the smallest signal details.

Numerous measurement functions for a thousand and one applications

The R&S®RTO6 is a universal instrument with a wealth of functions, which can be further expanded with software options to support many special applications. The zone trigger is an effective tool. Users can easily define trigger zones in both the time and the frequency domain by drawing them with their finger on the touchscreen. In the same way, users can set up mask tests with simple touch gestures for signal error detection with defined tolerance limits.

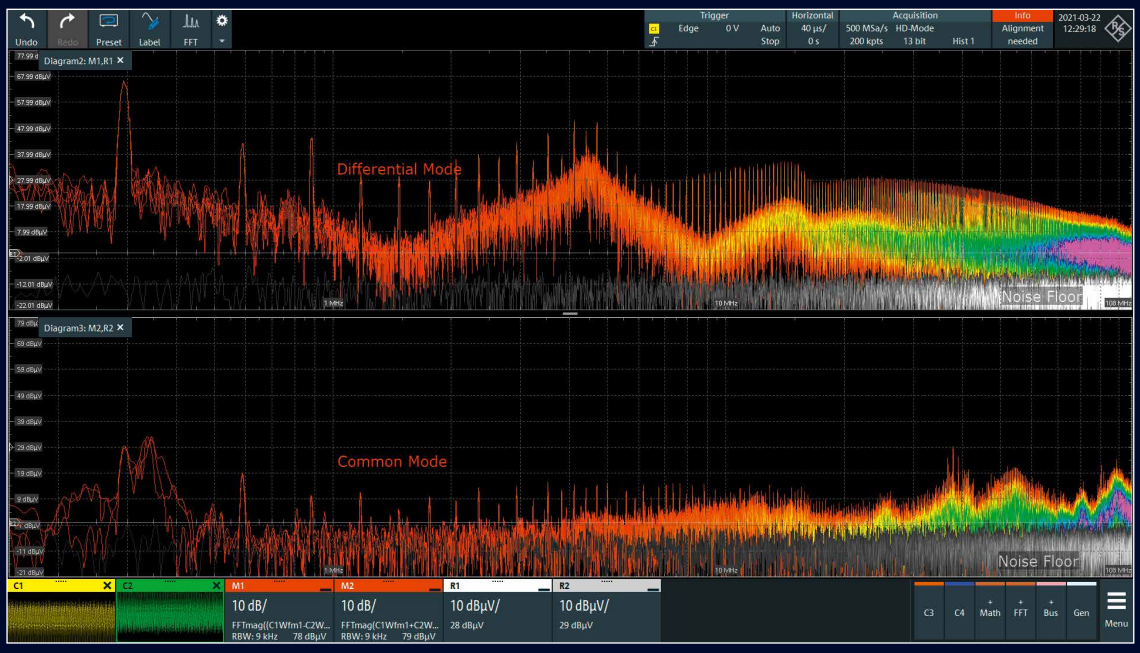
Software based applications include automated compliance testing of high speed interfaces including jitter and noise analysis, decoding of serial protocols, measurement functions for power electronics, and high-performance spectrum analysis (FFT), which supports users especially with EMI debugging. All measurement functions come preinstalled and can be enabled via keycode at any time. An extensive probe portfolio, which can also be used with other Rohde & Schwarz oscilloscopes, is available for contacting the DUTs. As with the previous R&S®RTO, the R&S®RTO6 has been optimized for maximum user convenience. A key factor for all-day stress-free lab use is quiet operation. The barely audible R&S®RTO6 fulfills all expectations also in this regard.

Dr. Tim Paasch-Colberg

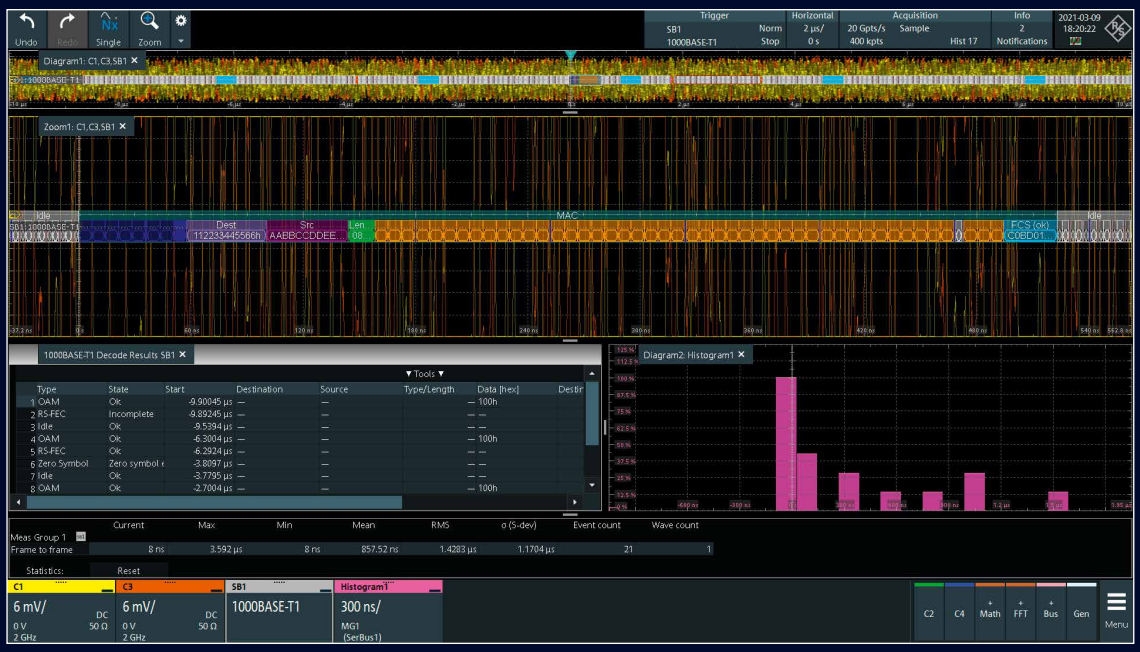
Made by users for users: Numerous customer demands were taken into account when designing the R&S®RTO6 to achieve maximum user ergonomics.

Users profit from a large-area measurement display and at the same time can quickly access all functions through a compact main menu and multiple toolbars.

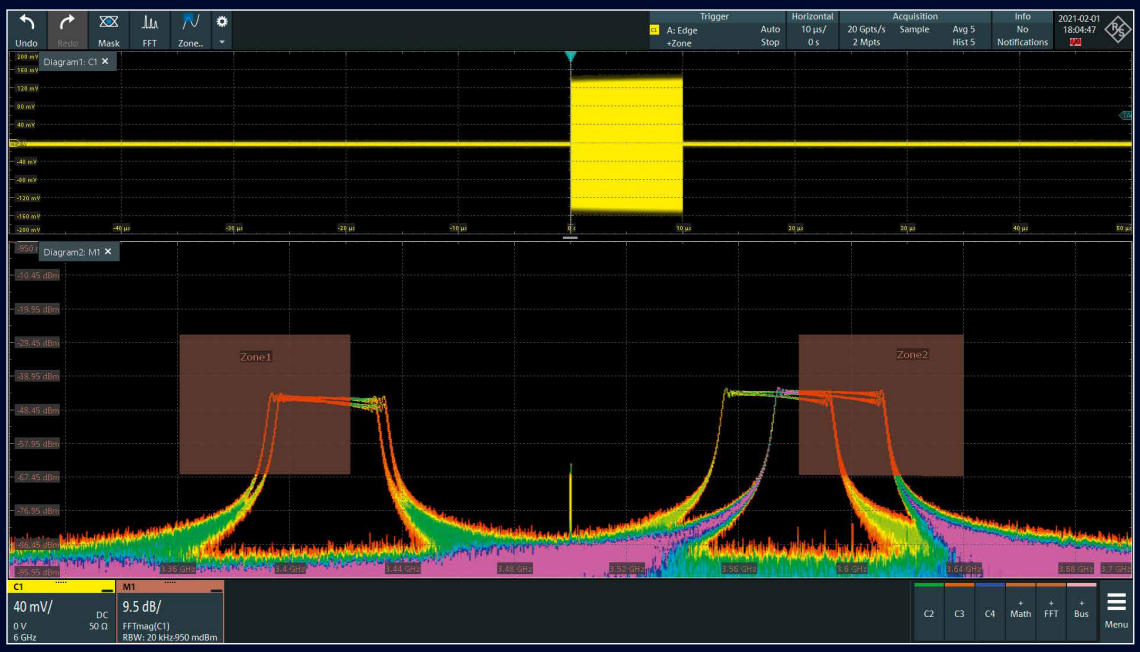
Four channels, two domains: It is often helpful to correlate the time and frequency behavior of a DUT. The R&S®RTO6 displays the DUT's time and frequency response for multiple channels simultaneously.



The FFT spectrum analysis function demonstrates its capability when measuring EMI such as conducted disturbance shown here.



Specialized software options are available to analyze Ethernet signals such as 1000BASE-T1.



The zone trigger lets users define up to eight trigger zones in both the time and the frequency domain and logically combine them using math functions – even over multiple channels.