Network Analysis Device Delivers Wider Dynamic Range and Short Measurement Times

The R&S ZNB and R&S ZNC from Rohde & Schwarz inaugurate a new generation of vector network analyzers. Featuring a dynamic range up to 140 dB, a sweep time of 4 ms with 401 points and excellent stability, the new analyzers offer significant advantages over competing products. They are designed for demanding applications in the production and development of RF components, particularly in the mobile radio and electronic goods industries. The network analyzers cover the frequency ranges from 9 kHz to 3 GHz, 4.5 GHz or 8.5 GHz. Both the R&S ZNB and the R&S ZNC have a large touchscreen that allows users to access all instrument functions with no more than three operating steps. The screen offers plenty of space for results, displaying even extensive measurements in a clear and straightforward manner.
The R&S ZNB, the more powerful of the two instruments, provides development labs and production lines with performance characteristics previously found only in high-end analyzers. The R&S ZNB covers the frequency range from 9 kHz to 4.5 GHz or 8.5 GHz and is available both in two-port and four-port models. Its wide dynamic range of 140 dB, low trace noise of 0.004 dB (RMS) and high output power of up to +13 dBm, which can be adjusted electronically in a range of 90 dB, provide fast and accurate measurements. This ensures high throughput in production. The R&S ZNB’s magnitude and phase drift are very low, resulting in excellent temperature and long-term stability. This makes it possible to perform precise measurements without recalibration over an extended period of time.

Thanks to its outstanding characteristics, the R&S ZNB is ideally suited for measurements on high-blocking filters or amplifiers that must be manually adjusted on high-volume production lines where speed and efficiency are critical. The large touchscreen is especially useful in this application. The network analyzer can also

be used to characterize duplex filters, multiport DUTs, mixers or differential SAW filters for transmitters or mobile terminals.

The R&S ZNC with a frequency range from 9 kHz to 3 GHz is a cost-efficient alternative for users who do not have such high requirements regarding dynamic range and functional scope. The R&S ZNC is available with two test ports and offers a sweep time of 11 ms with 401 points and a dynamic range of up to 130 dB. Its primary use is for testing passive RF components such as filters or cables.

The large touchscreen makes configuring, measuring and analyzing with the R&S ZNB and the R&S ZNC exceptionally easy. Instead of using submenus or nested menus, all context-based control elements are directly available on the soft panel. As a result, all instrument functions are accessible in three operating steps or fewer. Simply by touching the screen, users can create measurement windows, shift traces, set markers, adjust scales and zoom in and out for detailed analyses. Different instrument setups can be clearly arranged on individual tabs and called up instantaneously, allowing DUTs such as amplifiers or RF modules to be characterized even more efficiently. The user interface and online help are available in English as well as Chinese, Japanese, French and Russian.

Due to their short depth, the R&S ZNB and R&S ZNC leave plenty of room on the workbench for the measurement application. The test ports below the touchscreen are widely spaced. This avoids problems caused by small bending radii of the test cables, which results in fewer phase errors and less cable wear. Plus, the low power consumption and the sophisticated cooling concept keep operating noise and heat dissipation low and also reduce operating costs.

The R&S ZNC (two test ports, up to 3 GHz) and the R&S ZNB (two test ports, up to 4.5 GHz and 8.5 GHz) are now available from Rohde & Schwarz. As of September 2011, the two R&S ZNB models will be available with four ports.

For more information about the R&S ZNB visit http://www2.rohde-schwarz.com/en/products/test_and_measurement/network_analysis/ZNB.html [1]

For more information about the R&S ZNC visit http://www2.rohde-schwarz.com/en/products/test_and_measurement/network_analysis/ZNC.html [2]

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