



Rohde & Schwarz introduces the R&S ZNB3000, a new vector network analyzer optimized for high-volume production and short ramp-up times, thanks to industry-leading measurement speed and reliability. Its scalable design allows for rapid upscaling and easy adaptation to application-specific requirements. Featuring the highest dynamic range and output power in its class combined with future-ready performance, it supports the development of next-generation technologies.



Munich, February 25, 2025 — Rohde & Schwarz has expanded its vector network analyzer portfolio with the R&S ZNB3000, which offers best-in-class RF performance. It combines high measurement accuracy with exceptional speed. With its high throughput rate, the new vector network analyzer is especially suitable for high-volume production and short ramp-up time environments such as large-scale production of RF components. Innovative PCB-based frontends offer higher stability and minimize thermal drift, allowing reliable measurements over several days without recalibration.

With frequency ranges from 9 kHz to 4.5 GHz, 9 GHz, 20 GHz and 26.5 GHz, the R&S ZNB3000 addresses applications in the communications, electronic goods and aerospace industries as well as in the design of digital high-speed printed circuit boards.



and cables.

The R&S ZNB3000 has the highest dynamic range in its class of up to 150 dB and an excellent trace noise of less than 0.0015 dB RMS. It also has the highest output power in class, e.g., +11 dBm at 26.5 GHz, which results in better setup loss compensation. The instrument's segmented sweep feature uses flexible intermediate frequency bandwidth (IFBW) and power levels to speed up measurements for different parts of the filter structure. The filters can be easily test tuned for compliance with pass/fail limit lines. Thanks to its easy frequency upgrade concept, the R&S ZNB3000 meets fast scale-up requirements. Using external switch matrices, the instrument can be scaled up for multiport measurements up to 48 ports. In addition, numerous software and hardware options are available for broader application support.

As a high-precision instrument, the R&S ZNB3000 can be used in RF labs as well as on production lines. In both applications, knowing the actual uncertainty under given test conditions is crucial. Until now, calculating measurement uncertainty for the S-parameter results of a DUT was possible only in a metrology lab. With the R&S ZNB3-K50(P) option, developed in cooperation with METAS, the Swiss Federal Institute of Metrology, the R&S ZNB3000 can perform this calculation on its own. It automatically calculates the measurement uncertainty bands and displays them along with the measured S-parameters. Michael Fischlein, Vice President Spectrum & Network Analyzers, EMC & Antenna Test at Rohde & Schwarz, says: "Rohde & Schwarz invented the very first network analyzer over 70 years ago. This expertise has gone into the development of our latest instrument, the new R&S ZNB3000, which embodies our commitment to speed, scalability and stability. The R&S ZNB3000 enables engineers to navigate the complexities of next-generation technologies with confidence and precision, helping them fast forward to results in highvolume production and short ramp-up time environments."

Both the compact 2-port and 4-port models leave plenty of space on the workbench for the measurement application. The instrument's low power consumption along with a sophisticated cooling concept keeps operating noise down and reduces operating costs. The R&S ZNB3000 vector network analyzer is now available from Rohde & Schwarz. For more information, visit: www.rohde-schwarz.com/product/znb3000