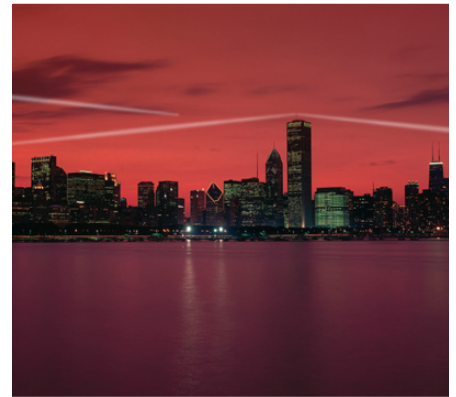


## OVERVIEW

TestWave software integrates test and measurement (T&M) equipment with high-frequency EDA simulation software to provide performance verification of communication systems and radio frequency (RF)/microwave circuits. Working seamlessly alongside Microwave Office® and Visual System Simulator (VSS) design software, TestWave enables you to perform software simulation trade-off studies with “hardware-in-the-loop.” You can integrate measurements made with instruments such as modulation analyzers, vector signal analyzers, and vector network analyzers directly into the simulation and modify the design to enhance its performance.

TestWave is extremely straightforward; wizards automatically let you interchange data between the simulation software and test hardware using industry-standard data formats for S-parameters, I-V data, amplifier compression curves, and many other characteristics. Dedicated blocks within software design projects automate the transfer of data between real-world measurements and the simulation to make the process simple.

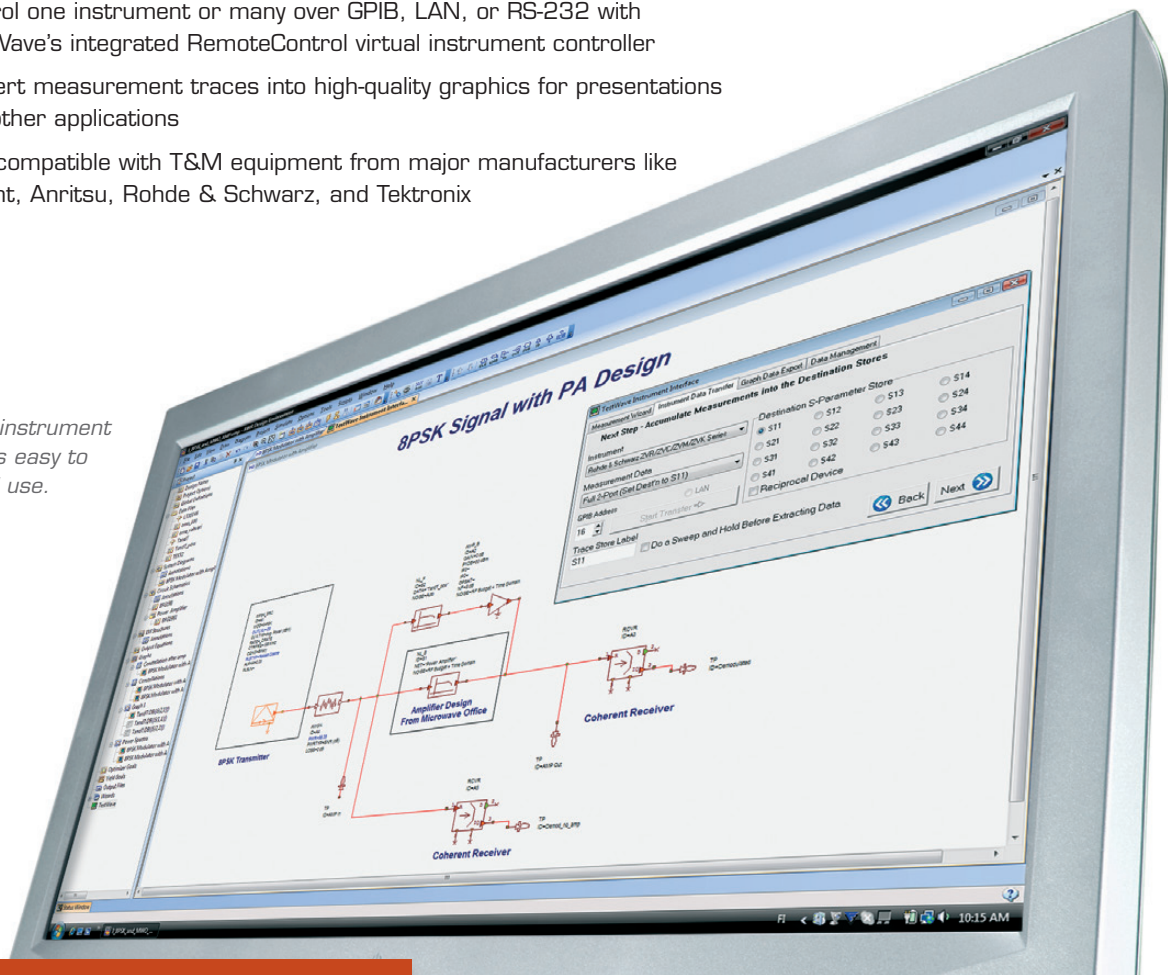


Adding the Assurance of T&M Verification To High-Frequency EDA

## FEATURES AT A GLANCE

- ◀ Brings together circuit and system-level simulation with actual standards-based measurements so you can optimize your design for “real-world” conditions
- ◀ Seamlessly integrates within the AWR Design Environment™, including Microwave Office high-frequency design software and VSS system-level design software
- ◀ Control one instrument or many over GPIB, LAN, or RS-232 with TestWave’s integrated RemoteControl virtual instrument controller
- ◀ Convert measurement traces into high-quality graphics for presentations and other applications
- ◀ Fully compatible with T&M equipment from major manufacturers like Agilent, Anritsu, Rohde & Schwarz, and Tektronix

TestWave instrument interface is easy to set-up and use.



## SIMULATION AND TESTING TOGETHER

The power of AWR's design software is simple: it lets you optimize a complete circuit, system, or subsystem by modifying the values of its components based on the effects of conditions it will experience in service. TestWave complements software design environments by bringing test equipment into the simulation for added verification assurance.

For example, suppose you want to monitor the impact of a physical device on a VSS receiver for IEEE 802.11a/b/g WiFi, CDMA2000, HSPA, W-CDMA, or other wireless system (AWR's VSS supports every popular standard). With TestWave you can send the baseband I/Q waveform data generated by the VSS transmitter to an external vector signal generator and stimulate a device used in the circuit. Then you can send the output of the device to a vector signal analyzer and compare the results with those in the VSS simulation. Based on these results, you can modify the values of the device or other elements of the circuit to achieve the desired level of performance. You can also send the signals from the device under test back into the VSS simulation as a stimulus to see how they affect performance.

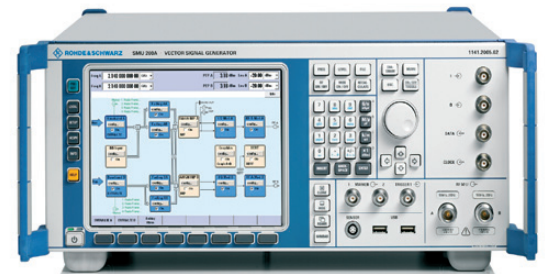
## THERE'S MORE...

**SoftPlot for TestWave** lets you convert measurement traces into high-quality graphics for presentations and other applications. You can format the measurements from complex data and graph them on Cartesian or Smith charts and other formats including log-frequency, IQ diagrams, and antenna polar plots.

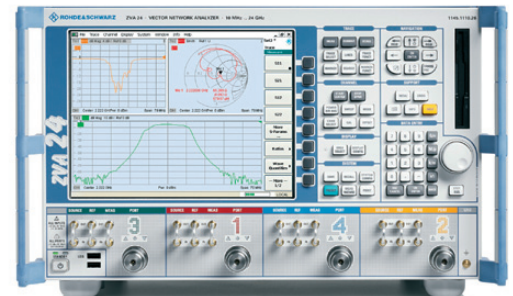
**RemoteControl** lets you directly control the measurement process itself via a remote control function. It's like having a built-in instrument controller for communication over GPIB, RS-232, or LAN that configures test equipment using test scripts and then commands them to run measurement routines. RemoteControl works with a single instrument or many, automating the measurement process and recording results in a convenient format.

## SUMMARY

With TestWave alongside AWR's Microwave Office and/or VSS design suites, you can combine schematic simulation, test signal generation, and measurement verification within one software design environment and gain the ability to perform design studies leveraging "hardware-in-the-loop." The result is a level of optimized circuit performance that's a trademark of the AWR Design Environment.



Hardware DUT



Hardware links to VSS through TestWave.



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