ADVANTEST

V93000 Wave Scale[™] RF Card

RF channel card's innovative architecture enables unprecedented multi-site and in-site parallel measurements for high-volume, low-cost testing of current and next-generation RF devices



The high-growth market for wireless communications presents several daunting test challenges. The wide variety of RF-based communication protocols demand test equipment that is both highly versatile and extendible to provide a path for testing the coming generation of 5G communications. The equipment also must deliver a low cost of test and high productivity to enable much faster time to market for new IC designs.

ADVANTEST's Wave Scale[™] generation of RF channel cards enables the V93000 single scalable platform to achieve industryleading parallelism and throughput in testing virtually all RF and mixed-signal semiconductor devices used in wireless communications. These cards empower the V93000 platform to conduct highly parallel multi-site and in-site parallel testing, achieving unprecedented performance.

All-in-One Test Solution

The flexible Wave Scale RF card is capable of testing the RF SoCs that drive LTE, LTE-Advanced and LTE-A Pro smart phones as well as LTE-M, WLAN, GPS, ZigBee, Bluetooth and IoT wireless applications. In addition to handling today's market requirements, it is designed with the extendibility to address projected technology changes toward the future of 5G networks.

Multi-Site and In-Site Parallel Testing

The Wave Scale RF uses an advanced architecture, allowing it to exceed the capabilities of traditional RF test solutions. While other systems test one RF standard per site at a time, this card enables simultaneous testing of multiple standards or multiple paths within each DUT. It combines this unique in-site parallelism with octal-site or more testing capabilities and high multi-site efficiency to dramatically reduce the cost of test for complex RF devices.

High-Volume Capabilities

With four independent RF subsystems per board, the Wave Scale RF card can handle the individual stimulus and measurement frequencies needed to test the full spectrum of devices used in wireless communications. Each RF subsystem has eight ports, which fan out the RF signal, and up to four independent measurement instruments. With this configuration, each of the four RF subsystems can be used across as many as eight sites to run receiver and transmitter tests simultaneously with all internal RF paths also tested in parallel. The system can handle a total of up to 32 sites per card for IoT, Bluetooth and other devices. The innovative V93000 test processor controls and synchronizes the parallel and independent operation of all instruments.

Each of the card's 32 RF ports can support up to 6 GHz for a bandwidth of 200 MHz. Additionally, internal loopback and embedded calibration standards contribute to the system's highly integrated architecture.



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ADVANTEST CORPORATION

United States Headquarters, Advantest America, Inc., 3061 Zanker Road, San Jose, CA 95134