Wireless Local Area Network (WLAN)

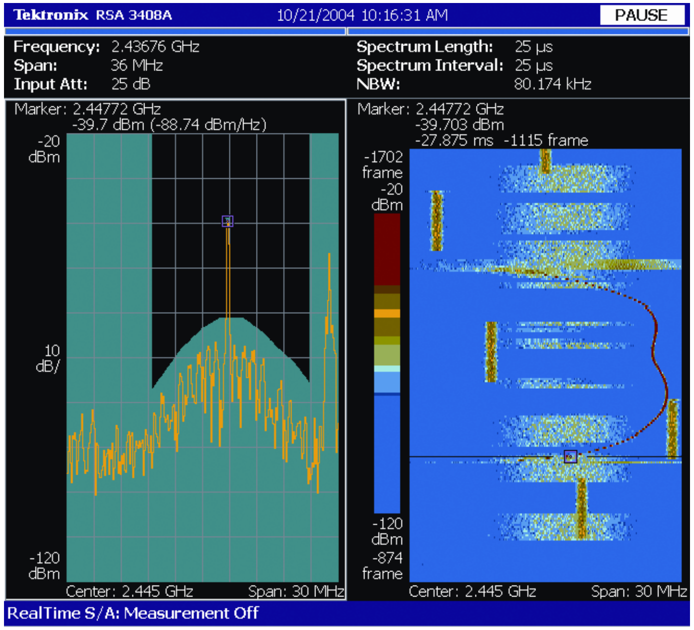
Delivering Confidence to Confront the Most Challenging Microwave and RF Designs

Wireless connectivity and reliability is challenging in uncontrolled and unlicensed spectrum environments with co-existing wireless technologies. Bursted communications from Bluetooth, Zigbee, cordless phones, and interference from microwave ovens can impact connectivity and throughput for Wireless Local Area Network (WLAN) systems.

With integrated support for the a wide variety of WLAN standards, Tektronix real-time spectrum analyzers can help with the most challenging design, compliance, and field testing challenges. With DPX“ Live RF spectrum display, patented Frequency Mask Triggering for event isolation, and unique MIMO measurements for link analysis, you gain the insight necessary to ensure your WLAN designs will operate successfully.

Wireless LAN Challenges:

Transmitter Design Validation	▪ Determine self-jamming of interference with other wireless communications on end-device ▪ Determine boundary or margin characteristic performance ▪ Correlate multi-domain measurements: time, frequency, modulation, and statistics with a single acquisition ▪ Assess MIMO link performance
Transmitter Compliance	▪ Assess key performance to standards with repeatable setups ▪ Assess low level spurs with narrow resolution bandwidths
Field Validation	▪ Map access point signal strength for indoor and outdoor environments ▪ Detect and classify signal interference in the field



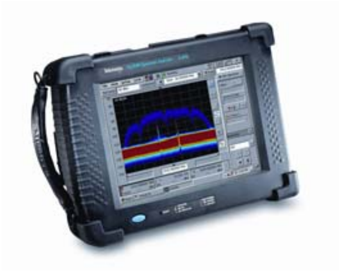
WLAN Solutions

Delivering Confidence to Confront the Most Challenging Microwave and RF Designs

Transmitter Design Validation and Compliance

RSA3000 Series Real-time Spectrum Analyzers

- Discover elusive spectrum events in-channel and on adjacent channels with 100% probability with over 48,000/s spectrum updates
- Trigger and isolate spectrum events with 100% probability using patented frequency mask triggering
- Capture long interaction records for across entire channel bandwidth
- Get repeatable results faster with standards-based measurements and automatic analysis
- Assess MIMO 2x2 transfer function for 802.11n
- Speed troubleshooting with correlation of frequency, time, modulation, and statistical domain on a single acquisition



Field Validation and System Verification

H600/SA2600 Series Real-time Spectrum Analyzers

- Discover elusive spectrum events with 100% probability with over 10,000/s spectrum updates
- Trigger and isolate spectrum events with threshold analysis
- Map signal coverage directly with integrated mapping functionality for indoors and GPS-assisted for outdoors
- Locate interference signals faster with simple direction finding tools
- Speed interference troubleshooting with built-in automatic signal classification capability

Transmitter Design Validation

RSA5000/6000 Series Real-time Spectrum Analyzers

- Discover elusive spectrum events across the entire ISM band with 100% probability with over 292,000/s spectrum updates and Swept DPX
- Trigger and isolate spectrum events with 100% probability using patented DPX Density™, Frequency Mask, and Time-qualified Triggering
- Capture all signals and interactions in the ISM band
- Flexible OFDM analysis and standards based analysis for IEEE 802.11 a/g/j and WiMax 802.16-2004
- Speed spur testing with the fastest scanning technology for wide spans and narrow resolution bandwidths

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