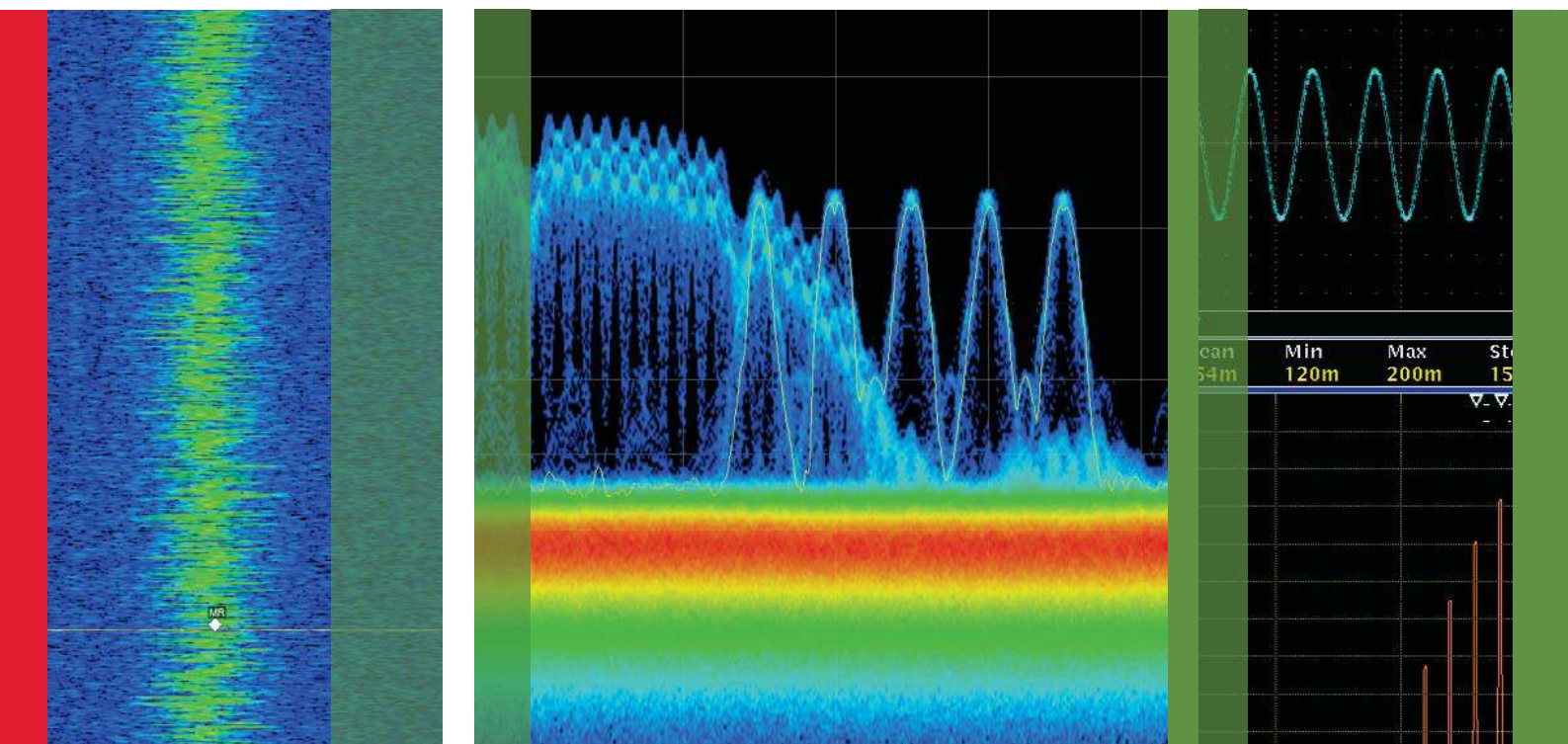


Wireless/RF Test

Selection Guide



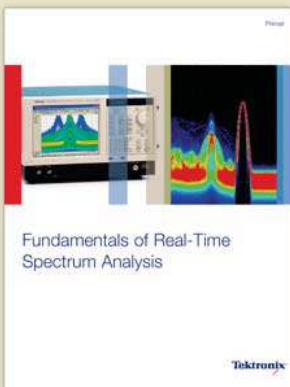


Choosing your Wireless/RF Test Solution

See an RF world others can't with affordable real-time performance. This guide gives an overview of the signal analysis capabilities required to overcome the most challenging wireless and RF design challenges with confidence. Spend your time fixing the problem, not looking for it.

If you need a refresher on Real-Time Spectrum Analysis, download the

Fundamentals of Real-Time Spectrum Analysis Primer.



Wireless/RF Test Instrument Types

Spectrum Analyzers: A whole new array of RF measurements is now within your reach.

- Wide capture BW (from 500 MHz to 33 GHz) and analysis capability (SignalVu-PC) at a low price point
- Up to 6 instruments in 1 delivers exceptional value
- Real-time signal analysis at a low price point
- Synchronization of RF with other analog/digital signals to debug problems faster
- Widest capture bandwidth for latest wireless standards like 802.11AC
- High probability of intercept

Signal Generators: Vector signal generation and digital modulation at an affordable cost.

- Inexpensive upgrade to vector signal generation
- Convenient software upgrade for digital modulation
- Arbitrary Waveform Generator options for generating custom and unique signals

Spectrum Analyzers



| | RSA306 USB Spectrum Analyzer | MDO3000 Mixed Domain Oscilloscope | MDO4000B Mixed Domain Oscilloscope | RSA5000B/ RSA6000B |
|---|---|---|---|--|
| | RF Signal Analysis in your hands | Six instruments in one | The only instrument that shows time-correlated analog, digital and RF signals | Advanced RF Performance |
| Frequency Range | 9 kHz to 6.2 GHz | 9 kHz up to 3 GHz | 9 kHz up to 6 GHz | 1 Hz up to 26.5 GHz |
| Demod/Capture BW | 40 MHz | Up to 3 GHz | Up to 3.75 GHz | Up to 165 MHz |
| RF Performance (DANL, Phase Noise, Accuracy) | Good | Good | Better | Best |
| Integrated Instruments | Spectrum Analyzer | Spectrum Analyzer Oscilloscope Logic Analyzer Function Generator Protocol Analyzer Digital Voltmeter/Counter | Spectrum Analyzer Oscilloscope Logic Analyzer Protocol Analyzer | Spectrum Analyzer |
| Correlation of RF with other analog/digital signals | N/A | N/A | Yes | N/A |
| Real-time Spectrum Analysis | Yes | N/A | N/A | Yes |
| Vector Signal Analysis Software | SignalVu-PC (Standard) | N/A | SignalVu-PC (Optional) | N/A |
| Form Factor | USB | Benchtop | Benchtop | Mainframe |
| Commonly Used For | General purpose RF Design Education Interference Hunting/ Spectrum Mgmt Field Installation and Maintenance | Basic Embedded Design and Debug General Purpose RF Design Education | Advanced Embedded Design and Debug General Purpose RF Design EMI Troubleshooting | Advanced RF Design Interference Hunting/ Spectrum Mgmt RADAR/EW |
| Price Range | \$3,490 | \$3,350 to \$16,400 | \$9,500 to \$25,700 | Click to Quote |

Signal Generators



| | TSG4100A Vector Signal Generator | AWG5000 Arbitrary Waveform Generator | AWG70000 Arbitrary Waveform Generator |
|---|--|--|--|
| | Comprehensive and affordable RF signal generation | High fidelity arbitrary waveform generation at a low cost per channel | Highest speed AWG for generating custom and unique signals |
| Frequency Range | DC up to 6 GHz | Up to 480 MHz | Up to 20 GHz |
| Modulation Bandwidth | 6 MHz Internal/200 MHz External | Up to 300 MHz | Up to 14 GHz |
| Switching Speed | 8 ms | Less than 2 μ s | Less than 20 ps |
| RF Performance (Phase Noise, Frequency Resolution, Accuracy) | Better | Good | Best |
| Output Channels | 1 | Up to 4 analog, up to 28 digital | Up to 2 analog, up to 4 digital |
| Modulation Schemes | Basic Analog (AM/FM/PM) | Basic Analog (AM/FM/PM) | Basic Analog (AM/FM/PM) |
| | Basic Vector (ASK/FSK/PSK/QAM/MSK/CMP) | Basic Vector (ASK/FSK/PSK/QAM/MSK/CMP) | Basic Vector (ASK/FSK/PSK/QAM/MSK/CMP) |
| | Cellular (GSM/EDGE/W-CDMA/APCO25-P1) | CPM, Analog and OOK Modulation | CPM, Analog and OOK Modulation |
| Signal Modification Capabilities | Digital Filters (Nyquist, Gaussian, Rectangular) | Digital Filters (Nyquist, Gaussian, Rectangular) | Advanced Embedded Design and Debug General Purpose RF Design EMI Troubleshooting |
| Form Factor | Benchtop | Mainframe | Mainframe |
| Commonly Used For | General Purpose RF Design Education RF Production Test Transceiver Test | Advanced Research Electronic Warfare RADAR | Advanced Research Electronic Warfare RADAR |
| Price Range | Starting at \$7,300 | Click for Quote | Click for Quote |

Featured Product: RSA306 USB Spectrum Analyzer

Tektronix | RSA306



Big Performance Has Never Been So Small.

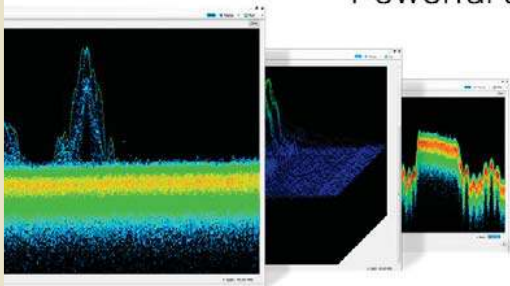
New RSA306 Spectrum Analyzer - only \$3,490*



RSA306 Spectrum Analyzer

The new RSA306 spectrum analyzer might be small but it packs a big punch. It's loaded with features you'd expect from spectrum analyzers twice the size and twice the price**, including real-time architecture and patented DPX[®] technology.

Powerful and Intuitive.



Discover the most difficult, hard-to-find events with the powerful architecture of the RSA306, featuring advanced DPX[®] technology to capture more data for the most accurate view of your signals.

And thanks to SignalVu[®] Essentials software, the RSA306 is as powerful as it is intuitive. SignalVu[®] Essentials delivers unlimited access to advanced measurement and analysis capabilities that you can save, customize or share peers.

[Download the Datasheet for all features, including analysis options.](#)

Unequaled Size. Unlimited Flexibility.

Weighing in at just 1.3 lbs., the RSA306 spectrum analyzer is conveniently sized for easy portability from your bench to the field and back. It's powered by your laptop or tablet giving you ultimate flexibility and convenience.

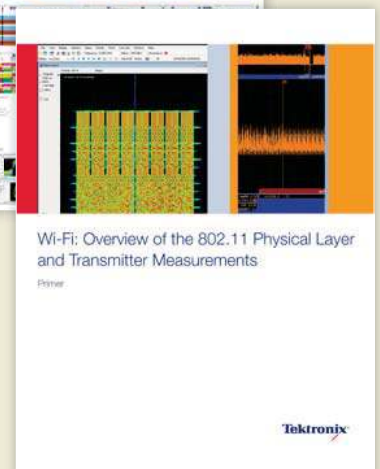
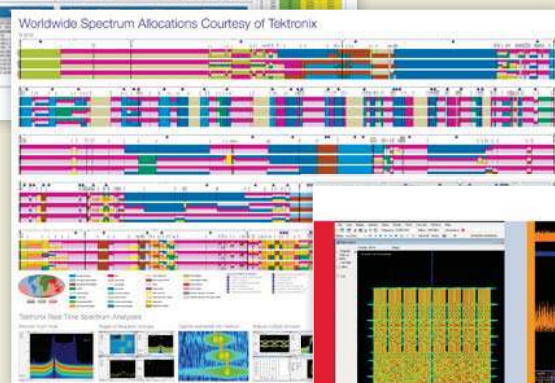
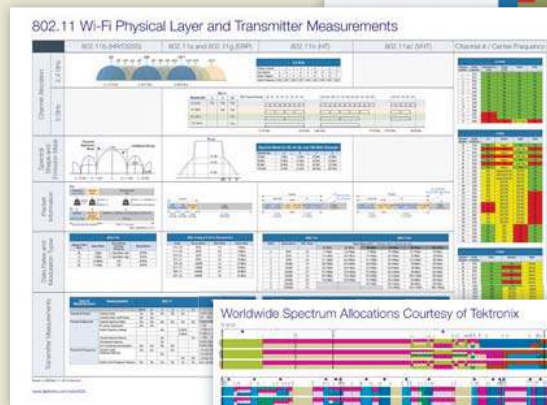
1.3 lbs.



Resources for You

Become RF experts with resources that provide insight into RF signal analysis, Wi-Fi, and spectrum allocation. Get our RF Resource Kit, which includes:

- **e-Guide to RF Signals:** This guide will teach you how to identify typical RF signals and give you sample waveforms for you to experience RF signal analysis for yourself. These sample waveforms can be used with SignalVu software, a free download.
- **Wi-Fi Poster:** Get your copy of this new educational standards poster which covers all aspects of 802.11 Wi-fi physical layer and transmitter measurements FREE.
- **Spectrum Allocations Poster:** New for 2014, free wall chart helps you visualize and understand Worldwide spectrum allocation.
- **Wi-Fi: Overview of the 802.11 Physical Layer and Transmitter Measurements Primer:** This primer provides a general overview for each of the 802.11 standards, including their PHY layer characteristics (spectral and modulation), their packet format and their transmitter testing requirements.



The Tektronix Service Advantage

Tektronix offers unequalled expertise, global reach and a customer-centric approach with every service option. From our full suite of Factory-Certified service plans for Tektronix equipment to our Multi-Vendor Service (MVS) calibration, we can ensure optimal performance for your entire inventory of test and measurement instruments.

Tektronix Service Highlights

- **Tektronix Factory Experts**
Access to the engineering expertise that designed and built your products to ensure they are in peak performance. Our support engineers hold an average of 20 years of training and experience.
- **Comprehensive and Thorough Treatment**
Software updates, safety and reliability modifications, and cosmetic enhancements are included if applicable. Products are returned to you in “like-new” condition. The Tektronix network of service centers offers worldwide support.
- **Efficiency and Convenience**
Our team of professionals focus on getting your instruments back to you as soon as possible, minimizing your downtime and increasing your operating efficiency.
- **Flexible Repair and Calibration Service**
Tektronix offers you the choice of a cost effective, flexible service package to meet your specific business needs.

Tektronix Factory-Certified Service Plans

| Silver Care | Silver Care Packages | Gold Care |
|---|---|---|
| <ul style="list-style-type: none"> ▪ Choose between a 3 or 5 year extended warranty plan ▪ No purchase orders, quotes, or approval delays – one phone call away starts the repair process ▪ Covers equipment, parts, labor and transportation ▪ Includes applicable software, safety and reliability updates ▪ Faster repair time than without coverage (average is 5 days faster) | <ul style="list-style-type: none"> ▪ All the benefits of our popular Silver Care Plan in a convenient package the size of a DVD case ▪ Each package includes a unique activation code to effortlessly initiate and manage your service coverage online ▪ May be purchased any time during the original warranty period | <ul style="list-style-type: none"> ▪ Choose between a 3 or 5 year extended warranty plan ▪ Loaner product of equal or higher performance shipped within 24 hours ▪ Priority access to Global Tektronix Customer Call Center for technical support ▪ 30% discount on scheduled Factory-certified calibration ▪ Coverage of user-caused EOS and ESD damage ▪ Typical downtime of 48 hours or less |
| Platinum Care | Calibration | |
| <ul style="list-style-type: none"> ▪ Custom-tailored plan with a typical downtime of less than 1 hour ▪ Identically configured spare products dedicated to your facility ▪ On-site calibration event and repair coverage ▪ Priority access to technical support, and flexible contract duration and payment terms | <ul style="list-style-type: none"> ▪ Choose from multi-year contracts and single event calibrations ▪ Accredited and traceable calibration ▪ Adjustments included to restore performance ▪ Applicable software, safety, and reliability updates ▪ Calibration records retention | |

Contact Tektronix:

- ASEAN / Australia (65) 6356 3900
- Austria* 00800 2255 4835
- Balkans, Israel, South Africa and other ISE Countries +41 52 675 3777
- Belgium* 00800 2255 4835
- Brazil +55 (11) 3759 7627
- Canada 1 (800) 833-9200
- Central East Europe and the Baltics +41 52 675 3777
- Central Europe & Greece +41 52 675 3777
- Denmark +45 80 88 1401
- Finland +41 52 675 3777
- France* 00800 2255 4835
- Germany* 00800 2255 4835
- Hong Kong 400-820-5835
- Ireland* 00800 2255 4835
- India +91-80-30792600
- Italy* 00800 2255 4835
- Japan 0120-441-046
- Luxembourg +41 52 675 3777
- Macau 400-820-5835
- Mongolia 400-820-5835
- Mexico, Central/South America & Caribbean 52 (55) 56 04 50 90
- Middle East, Asia and North Africa +41 52 675 3777
- The Netherlands* 00800 2255 4835
- Norway 800 16098
- People's Republic of China 400-820-5835
- Poland +41 52 675 3777
- Portugal 80 08 12370
- Puerto Rico 1 (800) 833-9200
- Republic of Korea +822-6917-5000
- Russia +7 (495) 7484900
- Singapore +65 6356-3900
- South Africa +27 11 206 8360
- Spain* 00800 2255 4835
- Sweden* 00800 2255 4835
- Switzerland* 00800 2255 4835
- Taiwan 886-2-2656-6688
- United Kingdom* 00800 2255 4835
- USA 1 (800) 833-9200

* If the European phone number above is not accessible,
please call +41 52 675 3777

Contact List Updated March 2013

For Further Information

Tektronix maintains a comprehensive, constantly expanding collection of application notes, technical briefs and other resources to help engineers working on the cutting edge of technology. Please visit www.tektronix.com



Copyright © 2015, Tektronix. All rights reserved. Tektronix products are covered by U.S. and foreign patents, issued and pending. Information in this publication supersedes that in all previously published material. Specification and price change privileges reserved. TEKTRONIX and TEK are registered trademarks of Tektronix, Inc. All other trade names referenced are the service marks, trademarks or registered trademarks of their respective companies.

