

**Tektronix**<sup>®</sup>

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# SOLUTIONS FOR AEROSPACE AND DEFENSE



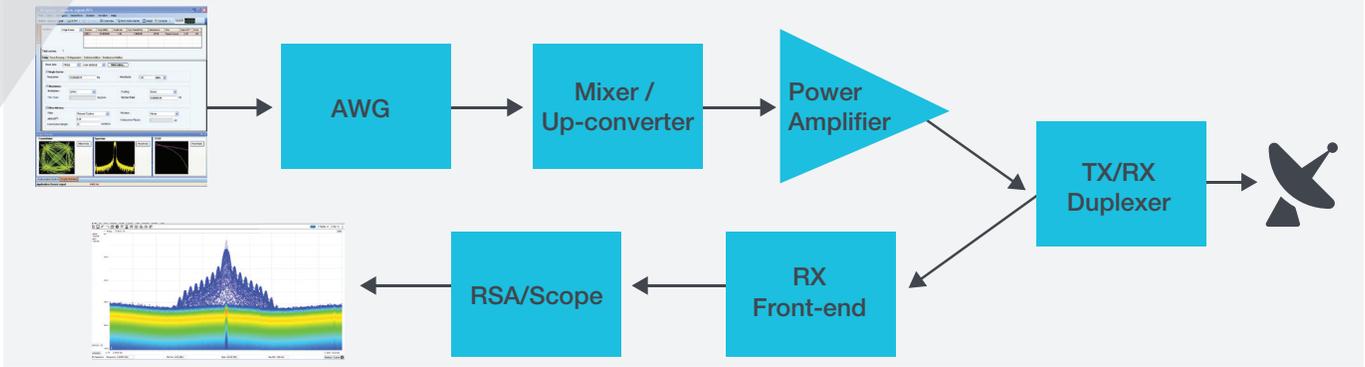
## Universal Alliance

For 70 years Tektronix has served our military and government partners with an ever-progressing capability for advanced electronic test & measurement. Offering a universal range of integrated, clever devices, software, applications and services, Tektronix is poised to take innovation beyond. From energy to communications, to defense to homeland security, ours is a shared mission to serve technical engineering with the highest fidelity. At Tektronix we're allied in our interests, to advance what's possible, perform as specified and serve when called.



## Active Listening

You can't always tell us what you're doing. That's no secret. But by being more careful listeners, Tektronix is distinguished for understanding and embedding the right technology in the right solutions for military/government applications. And so, helping you reliably listen and see signals at the highest fidelity. With a full range of integrated measurement tools for signal capture, characterization, simulation and analysis, we help the guardians of our land, citizens and resources deliver on their promise.

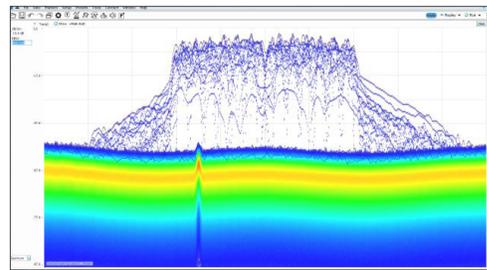


Complete test solutions for electronic warfare.

## Seeing it All

When you're designing mission critical devices, you don't want any surprises, like transient signals hidden from your view. Tektronix technologies reduce these risks with technologies that allow us to sample faster, process faster, generate faster and deliver insight faster than ever before. The DPX technology in our RF analysis portfolio products allows us to analyze the spectrum in real-time, catching signals you might otherwise miss. The Asynchronous Time Interleaving (ATI) technology that powers the DPO70000SX brings new levels of oscilloscope bandwidth, sample rate, and low noise performance.

SourceXpress and SignalVu are the signal generation and vector analysis software packages available.



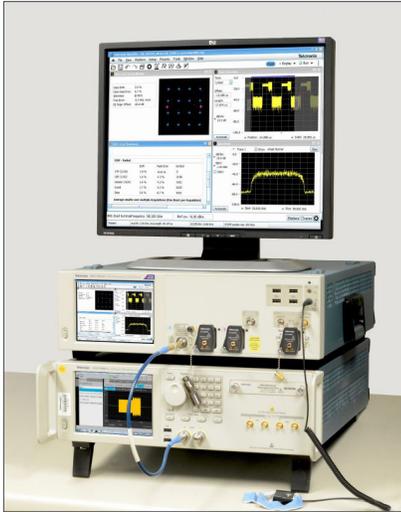
See lower power in band signals with DPX Spectrograms.

### Simplified with Software

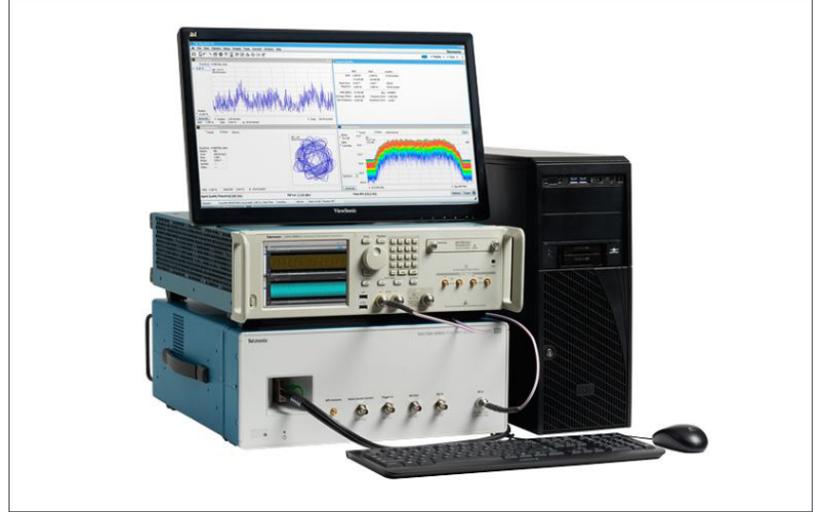
Trying to quickly perform iterative testing with home grown software can be difficult and time consuming, not to mention complicated. Whether it is generating a complex pulse train, calculating trend data on a series of radar pulses, or mapping sources of interference, Tektronix software and plug-ins save you time and effort.

### Legacy Integration, Support, and Security

Updating existing systems is challenging. Code compatibility, scalability, and hardware footprint are all important to making sure that you can Integrate new equipment into legacy systems. With rack mountable hardware, smaller footprints, and solutions built to sync and scale, Tektronix generation and analysis instruments make the most of the space you give them. Pre-compensation of S-parameters and low latency makes every cubic inch count.



*The DPO70000SX is the only scope on the market with an RF envelope trigger. The AWG70000 boasts a full function sequencer at 10 bits and up to 16GS of memory per channel.*



*The RSA7100A increases the likelihood capturing wideband signal transients of interest with real time signal capture and analysis.*

## Radars Design

Radars engineers developing and delivering very wide band radar and electronic warfare systems need to quickly measure spectrum and characterize pulsed RF signals with minimal impairments. Tektronix' DPO70000SX ATI oscilloscope with SignalVu for pulsed analysis and AWG5200/AWG70000 with Radar plug-in for pulsed generation provides industry best signal-to-noise ratio for analysis of wideband signals and wideband RF & modulation bandwidth with powerful sequencers for generation of 11+ GHz pulsed signals.

Unlike other oscilloscopes that offer less bandwidth, less RF and VSA measurement capabilities, and other pulse generators which have no sequencing capabilities, the Tektronix Wideband Radar solution, provides industry leading BW for the highest frequency range, widest bandwidth, and best signal fidelity measurements in wideband pulsed signal applications with advanced pulse measurement and vector signal analysis software packages.

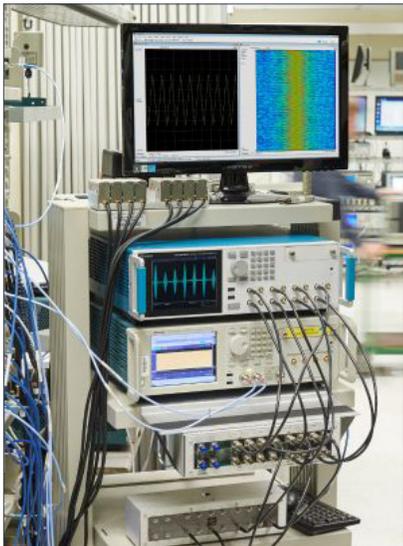
## Spectrum Monitoring and Operational /Environmental Testing

Spectrum managers perform spectrum clearing and interference mitigation by first monitoring and verifying wide radio channels. Field testers measure a wide spectrum and generate data to determine DUT behavior in real or simulated environments. In either case, RSA7100A reduces the cost of acquisition equipment while increasing recording capacity and signal analysis capabilities. Boasting 800 MHz bandwidth, 26.5 GHz acquisition system with recording for up to 2 hours, our solution triggers on and measure signals of 600 ns duration in frequency domain in real time, a 3x improvement over competitive instruments and delivers a complete higher bandwidth for the price.

“The RTSA has put us miles ahead. There’s no one who can touch us. The ability to see signals within another signal... you’re not going to get that from anyone else.”

## Environment/Threat Simulation

Building a threat environment involves making or recreating a lifelike radio signal as precisely as possible. This can be especially challenging, because most solutions compromise speed, bandwidth, signal fidelity, and memory. The AWG5200/AWG70000 Series, with up to 50 GS/s and 16-bit vertical resolution, delivers the industry's best signal stimulus solution, enabling easy generation of complex signals. The ability to create, generate, or replicate ideal, distorted, or "real-life" signals is essential in design, testing and operations of electronic warfare. Tektronix signal generation solutions make it make it easy to build complex signal environments with SourceXpress software and plug-ins.



*The AWG5200 offers a 10 GS/s sample rate with 16-bit resolution on up to 8 channels per unit along with support for multiple unit synchronization.*

## Simplifying Signal Generation.

The ability to create, generate, or replicate ideal, distorted, or "real-life" signals is essential in design, testing and operations of electronic warfare.

Tektronix signal generation solutions make it easy to build complex signal environments with plug-ins made especially for Radar, OFDM and Environmental Simulation, iterative testing can be conducted by adjusting pulse train variables or adding new signals to the environment.



*Multi-Unit synchronization of AWG70000s enables a multi channel high speed AWG system.*

## Satellite Communications

The availability of high-speed components (DACs/ADCs/DSPs) has enabled modern radio and satellite communication systems to improve capacity, utility, battery-life, and where necessary, avoid detection. Wider bandwidth and complex modulations can increase capacity. Dynamic SW control and advanced DSP can improve utility and battery-life. Baseband hopping utility can improve radio cloaking. Radio development teams have often seen the need to develop custom test benches to fully characterize and validate their designs due to the lack of commercial off-the-shelf solutions for design and development.

Whether you are moving into digital radio implementation or deploying mission-critical satellite systems, our innovative test solutions deliver the measurement confidence you need in your designs. Our signal generation and analysis tools provide the unique insight necessary for the development and debugging of modern communication systems with time synchronous multi-domain analysis across the functional components.



## Field RF

Maintaining clean spectrum environment to enable consistent, high quality communications requires constant vigilance and the ability to capture, analyze, and map transient signals as they appear. Lightweight, rugged, weather resistant tools are a must for interference hunters who call the field their office. Fast and light, the RSA500 and RSA300 series Real Time Spectrum Analyzers are ideal for portable analysis, interference hunting and network management applications. 40 MHz of real-time bandwidth allows you to analyze modern communication standards and SignalVu options minimize the time and cost to signal classification and mapping. Along with a Panasonic toughpad, carrying case, and smart antenna, the RSA500 and RSA300 series is a rugged, road ready package that offers tremendous performance at a competitive price.

“We would not be where we are today without the insights made possible by the RSA306.”

“Because they are versatile and easy to use, we get a lot of mileage out of our Tektronix instruments.”



## Capture Playback

SignalVu and SignalVu-PC now offer a capture/playback option for engineers that want to play back a real time signal for further analysis. SignalVu is the shared RF and Vector platform for all Tektronix signal acquisition products, so whether the signal was captured by a mixed domain oscilloscope in the lab or by a real time spectrum analyzer in the field, you can play it back whenever and wherever you need to. For longer recordings, DataVu software will search and mark signals of interest in large files.

# Your Complete RF Bench



## New! Signal Generator

The Tektronix 5200A Arbitrary Waveform Generator has the cleanest signal on the market at an unbeatable price per channel. With code compatibility you can fast forward integration and scaling while simplifying waveform design. Test and validate complex, sensitive devices with the accuracy and quality you expect from Tektronix AWG's.



## Real Time Spectrum Analyzers

Quickly and easily perform design tasks, from basic RF measurements to EMI sniffing and wireless standards compliance. Discover signal transients with 40MHz DPX real time analysis bandwidth. All Tektronix RSAs include SignalVu software for comprehensive spectrum analysis.



## Mixed Domain Oscilloscopes

The new MDO4000C includes up to six built-in instruments, each with exceptional performance to address tough challenges. The MDO4000C is the only scope to offer synchronized analog, digital and RF signal analysis at the same time.



## RF Vector Signal Generator

TSG4100A Series RF Vector Signal Generators offer mid-range RF performance and up to 200MHz modulation bandwidth. Convenient, in-field software upgrades to transition units from analog to more advanced vector and digital modulation capabilities, providing the most flexible configuration and best CAPEX protection.



## Power Supplies, Digital Multi-Meters & DC Electronic Loads

We never underestimate the need to supply clean power and make basic measurements with precision in your labs. That's why Tektronix and Keithley provide low cost digital multimeters, DC electric load, and power supplies.



## Complete the Solution with the Right Accessories

Get the whole solution from one place. Choose from a broad portfolio of high quality probes, cables, and calibration kits at an affordable price.

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