Deeper measurements for regulatory monitoring with thinkRF

Monitor
more locations with remote deployment

Detect
interference for better regulation

Analyze
signals and determine the source

Robust Analysis for Today's Complex Signal Environment

The wireless signal environment has changed significantly in recent years. The proliferation of wireless devices that transmit and receive multiple signal types has led to new sources of interference, both inadvertent and malicious. And the introduction of new signal standards, such as 5G, has driven frequency and bandwidth requirements well beyond what was previously the norm.

As the pace of innovation continues to increase, regulatory monitoring agencies will need new spectrum analysis solutions that are designed and built for the challenges of today's complex, dense, and diverse signal environment.

Applications and Requirements

Regulatory users require a solution that is:

Versatile enough to be used in various deployment scenarios

Capable of hunting for and detecting sources of disruptive interference

Flexible and powerful enough capture new signal standards with frequency and bandwidth requirements well beyond traditional limits

Able to monitor multiple signals at once and conduct in-depth analysis simultaneously

Scalable and cost-effective compared to traditional spectrum analysis equipment

DESIGNED FOR

REGULATORY AGENCIES

GOVERNMENT AGENCIES

FIELD AGENTS AND TECHNICIANS

Advanced Spectrum Monitoring

ThinkRF Software-Defined Spectrum Analysis solutions are built on innovative and highly optimizable software-defined radio (SDR) technologies, giving users greater versatility, better performance, and additional capabilities to conduct deeper analysis into complex and wideband signals of interest.

These solutions have been designed for spectrum monitoring from the start. Fewer hardware components means units are compact, lightweight, and portable, while purpose built networking capabilities allow them to be deployed remotely for continuous and distributed monitoring. Software-defined spectrum analysis equipment can be easily upgraded without replacing the hardware itself, allowing for greater flexibility and extending the useful life of the equipment.

ThinkRF Software-Defined Spectrum Analysis solutions enable users to:

Deploy equipment remotely in the field for increased coverage and improved visibility

Detect and locate sources of interference, including short duration or transitory signals

Capture wideband, high frequency, and complex signals, including those being studied for 5G technologies

Integrate with leading vector signal analysis (VSA) software for deeper analysis

The ThinkRF R5500 Real-Time Spectrum Analyzer Features

27 GHz frequency range, 100 MHz instantaneous bandwidth, and rapid sweep rates of 28 GHz/s to monitor a wide range of signal standards and modulation types

Purpose built networking capabilities with standard GigE interface and 360 Mbit/s stream rates for remote, in-place, and distributed deployment in any environment

Compact form factor (10.58" x 6.81" x 2.4") for use during truck rolls and in the field

The ThinkRF D2030 RF Downconverter Features

RF Downconversion for signals between 27-30 GHz to extend the range of existing equipment for 5G analysis

Up to 160 MHz instantaneous bandwidth, with the ability to run multiple units in parallel for wideband signal analysis

Easily integrate with existing spectrum analysis equipment, software, and interfaces to reduce the cost of upgrading current solutions

Compact form factor (7.5" x 8.5" x 1") to maintain portability and versatility in any deployment scenario

Multi-Vendor Capabilities for Deeper Analysis

ThinkRF Real-Time Spectrum Analysis Solutions are open and feature a rich suite of APIs and programming environments to work with best in class third-party hardware and software, such as MATLAB®, LabVIEW®, and C/C++ drivers and DLLs depending on your requirements.

The ThinkRF R5500 analyzer is also the first, third-party hardware to integrate directly with the leading Keysight 89600 VSA to provide advanced capabilities in a compact and cost-effective solution.

The ThinkRF R5500 analyzer with Keysight VSA software features:

Deep and consistent analysis of numerous wireless signal standards and modulation types, including 5G, LTE-Advanced, LTE, WLAN 802.11ac, 802.11n, 802.11a/b/g, AM, FM and others for interference detection and troubleshooting

Multi-measurement capabilities to configure, execute, and display multiple measurements simultaneously

High-resolution FFT-based spectrum, time, and modulation domain displays for in-depth analysis

ABOUT THINKRF

ThinkRF is the leader in software-defined spectrum analysis solutions that monitor, detect and analyze complex waveforms in today's rapidly evolving wireless landscape. Built on patented technology and quality by design principles, the ThinkRF platform offers greater versatility, better performance and additional capabilities for 5G, monitoring, signals intelligence (SIGINT), technical surveillance countermeasures (TSCM), and test and measurement applications. Aerospace and defense companies, spectrum regulators and wireless communications providers use the remotely deployable, PC-driven and easily-upgraded platform to replace traditional lab equipment for wireless spectrum analysis.

To learn more, please visit **thinkrf.com**, or contact sales@thinkrf.com to discuss your unique requirements.

thinkRF