

Powerful Signal Analysis for Wireless Research with thinkRF

Monitor

signals from the lab to the field

Detect

over-the-air signals to test
hypotheses

Analyze

signals in real-time or at
a later date



Take Measurements from the Lab to the Field

Today's wireless signal environment is more complex than ever before. Faced with rapid innovation, new wireless signal standards, and increasing frequency and bandwidth requirements, researchers must find new approaches to detecting RF interference, classifying signal types, testing propagation models, and ensuring coverage in a variety of environments.

They need a cost-effective, versatile, and networkable alternative to traditional, hardware-based spectrum analysis equipment. To conduct experiments and validate simulations or models under real-world conditions, these spectrum analysis solutions must be able to be deployed in both the lab and the field and integrate with common lab software and processing tools for deeper signal analysis.

Applications and Requirements

Wireless researchers require a solution that is:

Scalable and cost-effective

Compact, portable, and lightweight

Remotely deployable in the lab, field, or other environment

Interfaced with a standard PC across Gigabit Ethernet

Easily integrated with popular lab tools such as LabVIEW, MATLAB, Keysight 89600 VSA, C/C++, or Python

DESIGNED FOR

RESEARCH
LABS

UNIVERSITIES

WIRELESS
RESEARCHERS



Look Deeper into Signals

ThinkRF Software-Defined Spectrum Analysis solutions are built on innovative and highly optimizable software-defined radio (SDR) technologies, providing users more flexibility, greater coverage, increased functionality, and better ROI. Unlike traditional lab monitoring equipment, ThinkRF solutions are compact and networkable with open APIs and proven integrations that offer the best price-performance ratio available.

ThinkRF Software-Defined Spectrum Analysis solutions enable:

Dynamic signal allocation

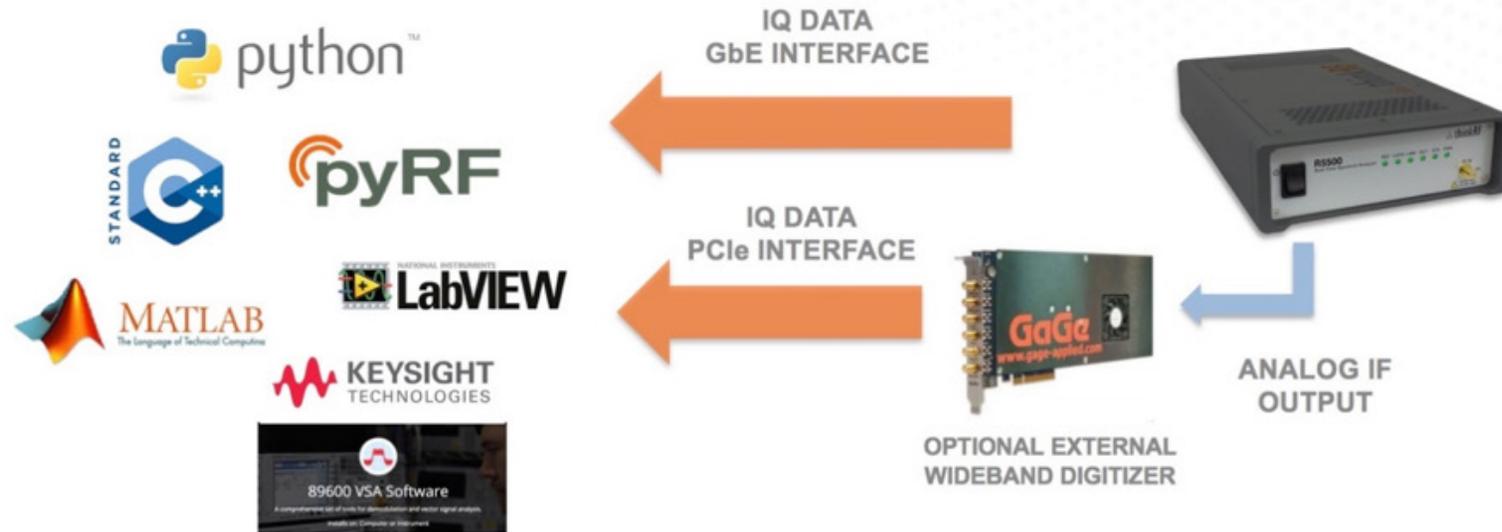
Channel sounding

Wideband spectrum analysis

Wireless propagation analysis

Automatic signal identification

Other common research applications



ThinkRF R5500 Real-Time Spectrum Analyzer Features

The ThinkRF R5500 Real-Time Spectrum Analyzer allows wireless researchers to test hypotheses and validate results through experimentation, with features including:

The ability to digitize and acquire IQ data using either the internal digitizer or an external one, such as those from Dynamic Signals.

Real-time analysis of IQ data, or save and forward capabilities for post analysis with MATLAB or C/C++

Gig E interface for deployment in the field without a local PC

Frequency range up to 27 GHz and real-time bandwidth up to 100 MHz to analyze modern signal types

Develop RF Applications with a Full Suite of APIs and Programming Environments

ThinkRF Real-Time Spectrum Analyzers support conventional lab based software and tools that allow you to develop your own application through APIs, including:

LabVIEW

MATLAB

C/C++

Python



Proven Integration with Keysight 89600 VSA

For deeper signal analysis and demodulation, ThinkRF R5500 Real-Time Spectrum Analyzers offer the first and most complete third-party integration with leading Keysight 89600 VSA software via the ThinkRF E300 Enabler for Keysight VSA.

The combined solution allows researchers to analyze multiple signals at once, pinpoint root causes of problems in frequency, time, and modulation domains, customize measurement displays, and view over 75 different

signal standards and modulation types. ThinkRF spectrum analyzers offer researchers a cost-effective, lightweight, portable, and networkable alternative to traditional lab equipment, and are ideal for users who require distributed, modular, reprogrammable, or reconfigurable equipment for specific research applications.

ABOUT THINKRF

ThinkRF is the leader in software-defined spectrum analysis platforms that monitor, detect and analyze complex waveforms in today's rapidly evolving wireless landscape. By providing more flexibility, greater coverage, increased functionality and better ROI, ThinkRF solutions are ideal for regulatory and intelligence monitoring, telecom deployment optimization and RF application development. With open APIs and proven integrations, ThinkRF offers the only compact and networkable spectrum analyzer that can be deployed without a PC and the best price to performance on the market. Founded in 2006, ThinkRF is headquartered in Ottawa, Canada with offices and partners globally. Visit www.thinkrf.com or follow us on [Twitter](#) and [LinkedIn](#).

Please contact sales@thinkrf.com to discuss your unique requirements.



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