ThinkRF Extends the Performance of VIAVI CellAdvisor into 5G
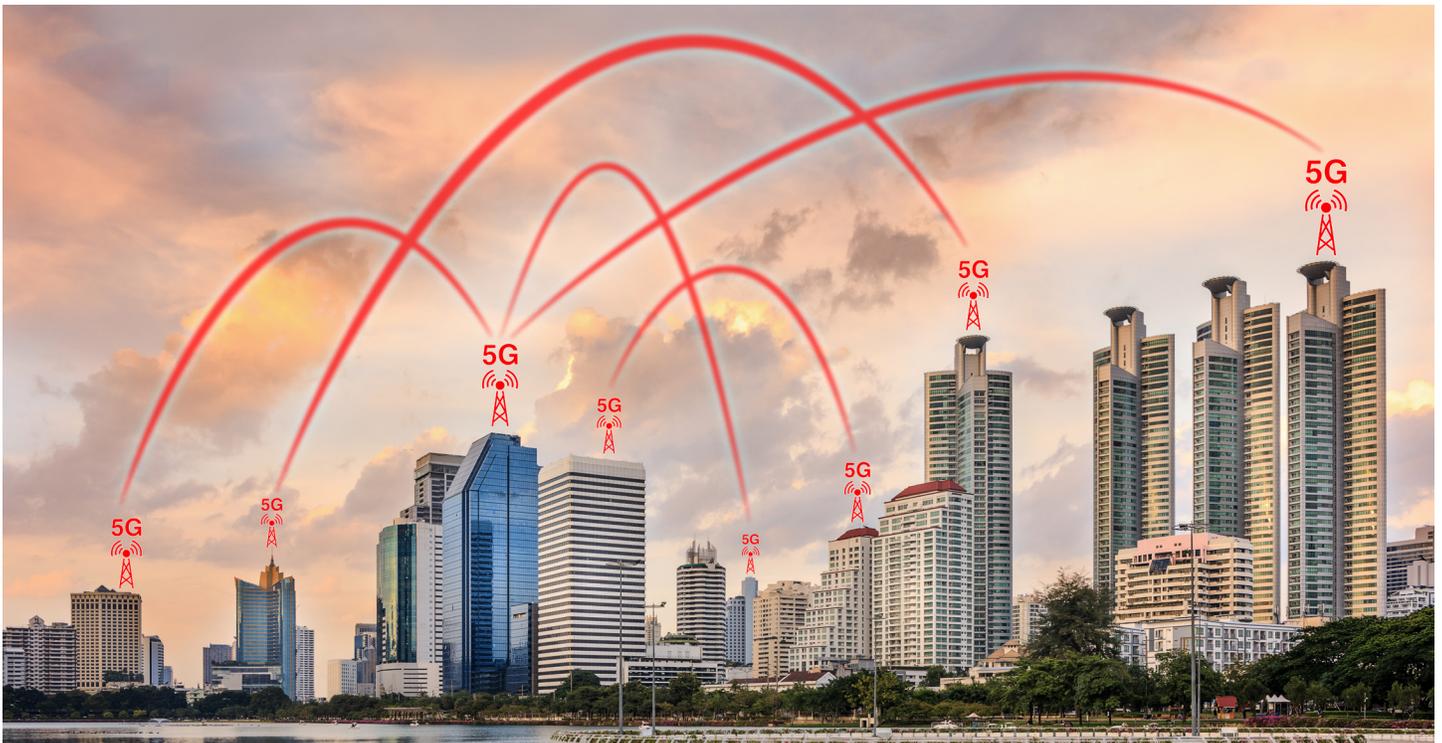
VIAVI Solutions is a leader in helping service providers deploy, maintain, optimize, and evolve the world's largest and most complex wireless networks through end-to-end solutions. The VIAVI CellAdvisor test solutions are designed for installation and maintenance of cell sites, troubleshooting, and interference hunting. These solutions are intended to be used in the field and have a frequency range of 9 kHz to 8 GHz.

APPLICATIONS

Frequency extension for field equipment

5G interference hunting

5G research and testing
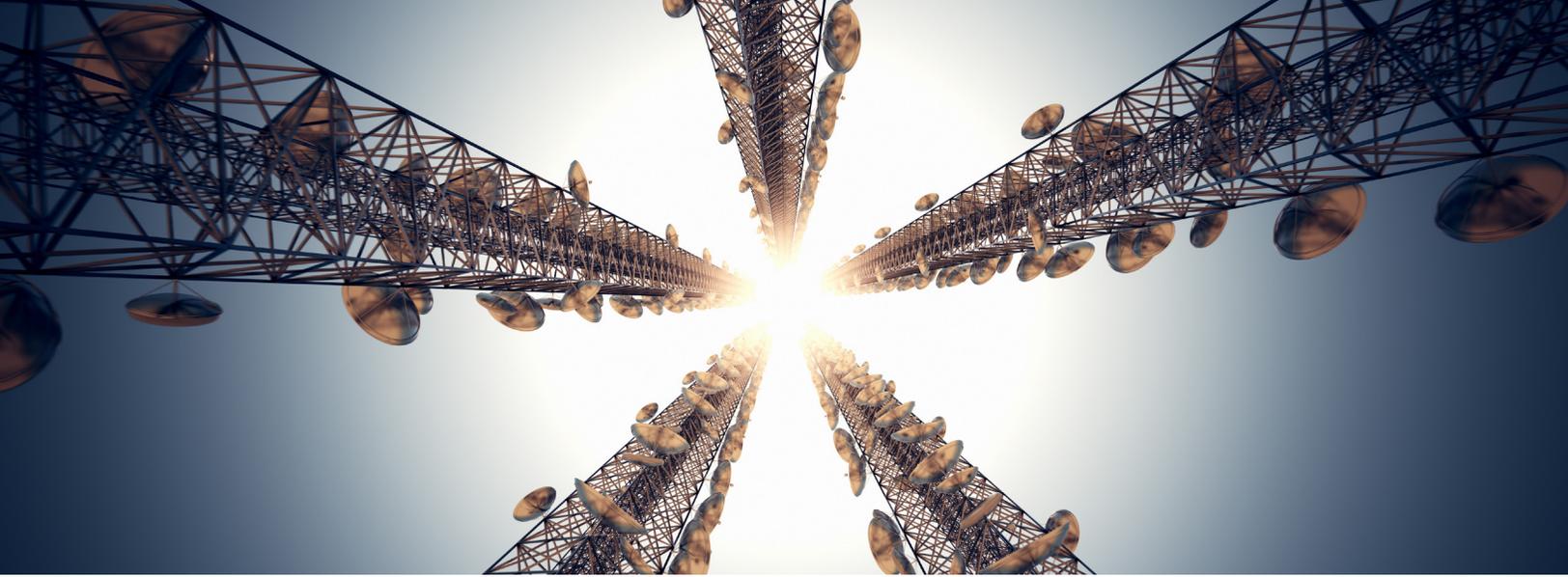
The Scenario

With the introduction of 5G wireless technologies, CellAdvisor solutions do not have the frequency performance required to detect and analyze new signals being studied for 5G, namely the 28 GHz band. VIAVI needs an RF Downconverter that extends the range of their existing solutions without requiring agents in the field to fully replace their current test and measurement equipment.

The Requirements

To make the solution viable for their existing customers, VIAVI had several important requirements, including:

Ability to capture signals in the 27 GHz – 30 GHz bands

Downconversion of signals to below 6 GHz to work with all existing CellAdvisor units already deployed

Portable, lightweight, and low power consumption to maintain usability in the field

Easily integrated using standard SCPI controls over Ethernet or directly from CellAdvisor

Competitive cost

The Solution

VIAVI turned to ThinkRF to design and build the ThinkRF D2030 RF Downconverter based on their proven experience developing compact, portable, and versatile software-defined spectrum analysis solutions.

The D2030 RF Downconverter extends the performance of existing spectrum analysis solutions into 5G without adding significant, size, weight, power, or cost requirements. Mobile operators, field technicians, and wireless service providers with spectrum analysis equipment from any vendor, not just VIAVI, can quickly integrate the D2030 RF Downconverter into their current setups without any additional training using standard SCPI controls.

Users simply connect the D2030 RF Downconverter to their spectrum analyzer via the IF Out port and control it using the spectrum analyzer or a PC through the networking port.
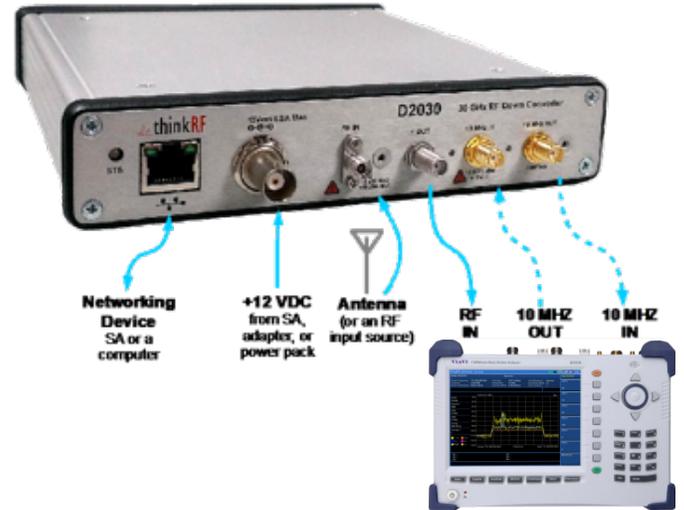
The ThinkRF D2030 RF Downconverter seamlessly integrates with existing third-party spectrum analyzers to extend capability into 5G.

The D2030 RF Downconverter Features:

27 GHz – 30 GHz frequency range

Up to 160 MHz real-time bandwidth (RTBW)

High IF output at 3.55 GHz or 5.6 GHz

10 MHz input and output clock references for multi-unit synchronization

Compact size at 7.5" x 8.5" x 1" and weight of less than 2 lbs

Easily integrated with any third-party spectrum analyzer with frequency performance of at least 6 GHz

The Results

ThinkRF successfully developed a solution to extend VIAVI CellAdvisor units into 5G. Leveraging the highly optimizable, software-defined spectrum analysis solution from ThinkRF, users in the field can now capture 5G signals in the 27 - 30 GHz range, where previously they were limited to existing 3G or 4G/LTE signals. Their current test and measurement equipment can now be used for interference hunting, research, and testing of 5G wireless technologies.

" Through this collaboration with ThinkRF we can address a key requirement from our customers to extend the investment they have made in their test and measurement equipment to the 5G spectrum. What we developed with ThinkRF is clearly a game-changer for many industries that need a cost-effective solution to address the opportunities that 5G creates. **"**

Jim Neuens, Marketing Director Metro and RF-Test Business Units of VIAVI

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.

For more information, visit www.thinkrf.com, contact info@thinkrf.com or on Twitter, LinkedIn and YouTube.

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