



Spectrum Compact

Drone-compatible Solutions for
Regulatory authorities
and business

www.spectrumcompact.com

Spectrum Compact for Drone Solutions

Commercial drones are changing the way companies and regulatory authorities audit and inspect wireless infrastructure. They enable rapid, repeatable, and safe collection of high-resolution images and video of tower structures and equipment as well as real-time spectrum scans and measurements.

For Commercial Entities

SAF Spectrum Compact is integration ready platform with application programming interface (API), which in partnership with industrial drone manufacturers and drone solution integrators, can bring to market an aerial RF inspection solution. Leveraging the best drone airframe and proprietary control protocol, users can produce full frequency RF density heat maps using the GPS data from the drone.

Using drones for tower inspection:

- dramatically increases the safety of climbers;
- reduces or eliminates the need for re-climbs;
- provides a pre-climb visual so the climber brings just what's needed up the tower.



SAF Tehnika teamed up with one of the EU's national regulatory authorities to develop a solution for precise E-band link measurement and reporting using Spectrum Compact attached to a drone.

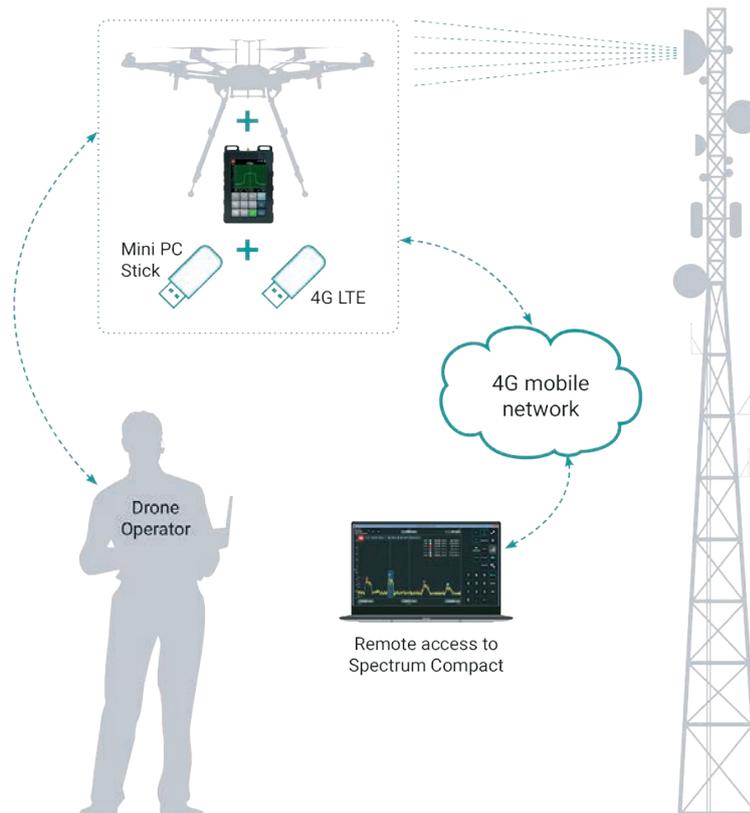
For Regulatory Authorities

E-band frequencies are becoming more widespread for public services all around the world, and national frequency regulators are faced with new challenges posed by E-band links. Within the 70-87 GHz range, point-to-point radio antenna's Half Power Beamwidth (HPBW) is 1 degree and even less, thus requiring a new and innovative solutions for radio parameter measurements.

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Frequency regulators have to verify that E-band radio is working according to license. Antenna is high up on tower and signal from sidelobe is being attenuated so significantly, that typical approach of doing measurements from ground level can't be used. Regulator is not allowed to climb the tower to do measurements in close proximity of antenna. For this case, measurement tool has to be delivered precisely in the main lobe of antenna.

Spectrum Compact device is attached to a drone and connected to a mini PC with pre-installed Spectrum Manager software. It is also connected to a smartphone for data transmission over 4G network as shown in the schematics.



The solution consists of a Spectrum Compact 70-87 GHz unit, mini PC with Windows OS, 4G modem, Spectrum Manager PC software and an unmanned aerial vehicle – drone.

Utilizing connection to the mini PC on the drone via remote desktop application to access Spectrum Manager, engineer can view measurement data in real-time mode and save scans for later analysis and reporting. This way it is possible to immediately detect if radio operates according to license and saves data for later processing and reporting.

Same approach can be taken with any of Spectrum Compact 300 MHz - 87 GHz frequency range devices.

With Spectrum Compact tower owners, operators and users can easily gather and analyze 4G, LTE and 5G NR frequencies right at the source, while regulatory authorities can develop a new means of site surveys and inspections.

About Spectrum Compact

Spectrum Compact is a truly hand-held and easy to use test and measurement solution for the 300 MHz – 87 GHz licensed microwave frequency bands. Product line consists of eight devices, each dedicated for its own frequency range, and has an affordable price.

Spectrum Compact devices are designed specifically for comfortable outdoor use by microwave engineers, and can also be used for various applications in Distributed Antenna Systems (DAS), LTE, VSAT, 5G and cellular network environment.

Spectrum Compact is a perfect solution for wide range of applications - from RF parameter measurement and testing to signal monitoring, troubleshooting, radio RF parameter measurement and interference detection.

- Small & Light, designed for field use
- Quickly discover illegal spectrum users
- Quick interference discovery
- Every scan can be saved and added to reports
- No hidden costs
- Touchscreen



For inquiries, write to info@saftehnika.com

To learn more about SAF Tehnika, our products and solutions, please visit our website
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