

# Spectrum Monitoring

iDirect Government's spectrum monitoring tools perform automatic and operator directed spectrum monitoring to detect interferences and unauthorized users, measure carrier and transponder performance and generate out-of-tolerance alarms. These tools allow the user to effectively measure and analyze the transponder spectrum.

Our spectrum monitoring products can be used as stand-alone appliances or as part of a larger spectrum monitoring network to include our Geolocation capabilities as well. The flexible architecture allows for plug and play operation locally and/or remotely via a standard LAN/WAN.

Access to all spectrum monitoring operations is through an easy-to-use Windows application that can run on one or multiple workstations. Easily accessible through our webserver, spectrum monitoring measurements can be accessed anywhere via a standard web browser.

## What is Signal Under Carrier (SunCar)

SunCar is used to detect, measure and characterize noise and interference within a satellite band to another signal. SunCar provides the user with an effective tool for the troubleshooting and identification of in-band interference including cross-pol or adjacent satellite interference while the traffic-bearing carrier remains in service.

## Transponder Compression Measurement (TOP)

TOP is an accurate, non-intrusive robust measurement to detect transponder compression and saturation. It is used to closely monitor transponder compression, in turn helping to prevent transponder power overload in addition to detecting other anomalies such as High Power Amplifier (HPA) or upconverter saturation.

## Paired Carrier Monitoring

By performing standard spectral measurements such as carrier power, bandwidth and signal characterization measurements including modulation recognition and symbol rate measurements, the paired carrier monitor detects and monitors each paired carrier independently.

## In Phase and Quadrature (IQ) Constellation Display

The IQ Constellation Display provides operators a graphical tool to view and diagnose carrier performance problems. The display offers an immediate visual feedback that reduces time spent troubleshooting carrier performance degradation.

## SimulView

SimulView provides a graphical representation of up to nine transponders and/or carriers in any combination of the two in a single display. Operators can use the built-in "view-n-view" function to quickly zoom in on a detailed view of the carrier measurement results.

## Reporting Tools

Our spectrum monitoring tools have a built in suite of reporting capability for tabular and graphical reports including; waterfall spectra display, carrier performance and transponder performance. Reports can be generated in both a PDF format or video format.

