Monics® Net

Advanced and Scalable Carrier Monitoring and Interference Identification Solution

Interference continues to be a wide spread issue with 93% of the satellite industry suffering the effects, whether it's a once a week or yearly occurrence. It costs satellite operators, broadcasters and service providers millions of dollars per year from a revenue standpoint and in the amount of resources needed to mitigate events to minimize service degradations, delays and loss of bandwidth.

Monics Net® is the industry leading carrier monitoring and interference detection product used by the majority of the of the world's largest satellite operators, service providers and telecommunications providers to monitor over 200 sites in 60 countries around the globe.

Protect Revenue with Advanced Interference Identification Capabilities

Monics Net helps operators effectively see what is happening with their communications payloads and protect bandwidth and Quality of Service (QoS), while optimizing staff utilization and minimizing costs. Using advanced Digital Signal Processing (DSP) technology, Monics Net provides insights beyond a traditional spectrum analyzer.

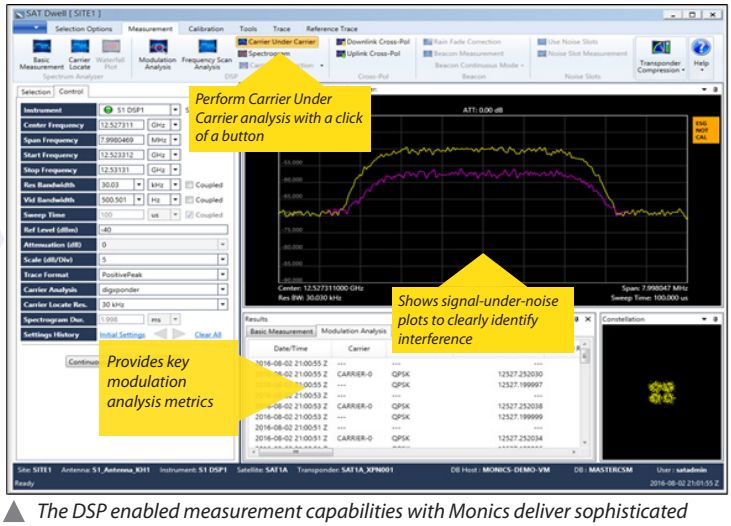
- Identify and analyze interfering signals underneath revenue generating bandwidt without service interruptions
- Provides time domain analysis capabilities including modulation type, symbol rate, measured Es/No, Eb/No and optional FEC detection

Standard Frequency Domain Measurements	Kratos DSP Enabled Time Domain Measurements
Center Frequency	Modulation Type
Bandwidth	Symbol Rate
EIRP	Es/No
C/No	Eb/No
C/N	Data Rate
Backoff	BER
PEB (Lease Blocks)	C/I
(Co+No)/No	Optional Carrier Standard Detection
	Optional FEC Detection

Kratos' DSP technology provides advanced time domain measurements beyond a spectrum analyzer.

Gain new insight into TDMA network bandwidth usage

- Classify TDMA networks by performing a Frequency Scan analysis on transponder or on bandwidth
- Characterize channel performance based on TDMA system type, EIRP, ES/No, bandwidth and other measurements
- Accelerate troubleshooting by identifying customer channels that are errant or interfering with bandwidth
- Improve workflow by defining and saving complete TDMA networks in Monics database



The DSP enabled measurement capabilities with Monics deliver sophisticated interference detection capabilities.

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- Enables advanced analysis capabilities including – carrier under carrier, frequency scan, spectrogram, DVB-CID identification and FM demodulation
- Improves visibility into RF operations and confidence in SLAs with precision measurements that provide repeatable results

Automate Performance Monitoring and Alarm Generation to Maintain Service Levels

Monics Net automatically verifies normal carrier and transponder values by comparing actual to expected performance to rapidly identify bandwidth issues. Alarms are immediatley displayed and alerts sent to an operator when abornmal bandwidth performance is detected.

- Ensures bandwidth availability and optimizes staff resources with automatic monitoring capabilities
- Accelerates resolution time with alarms that have clear and concise cause definitions
- Continues to run automated bandwidth monitoring even during a network outage to avoid the loss of any measurement data

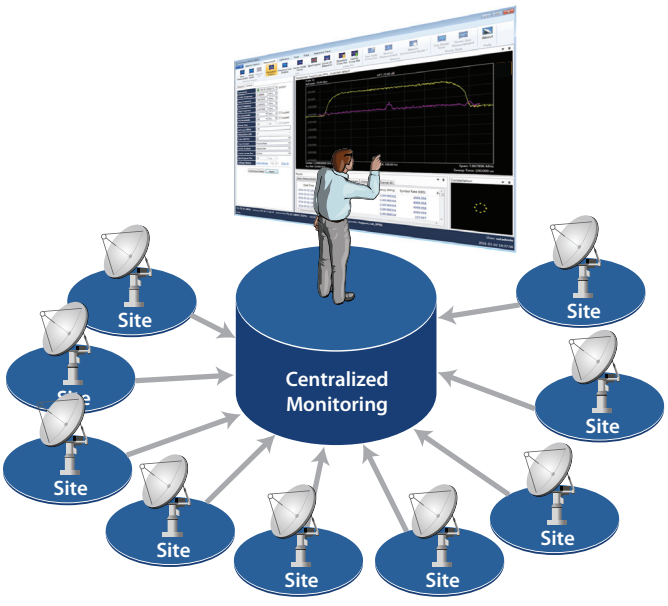
Optimize Operational Efficiency by Centralizing RF Spectrum Monitoring

Monics Net provides operators the ability to manage globally distributed multi-site teleports, earth stations or gateways from a central NOC location increasing operational efficiency and reducing the time needed to manage and protect RF spectrum.

- Improve visibility across globally distributed RF operations
- Optimize staff resources across the enterprise
- Lower costs by sharing monitoring instruments between automatic bandwidth monitoring tasks and essential manual spectrum analysis efforts
- Retrieve historical measurement data and spectral traces from a central repository
- Enhance operational efficiency with enhanced site status providing visibility into all monitoring sites

Scale Monitoring Operations with Growth

With its modular architecture, Monics Net has proven to be the most scalable interference detection and carrier monitoring system in the world. From monitoring a single site for a teleport operator or service provider to the largest worldwide deployments from industry leading satellite operators.



▲ *Enhance operational efficiency by monitoring a large number of sites through a central Monics Net client that is highly scalable.*

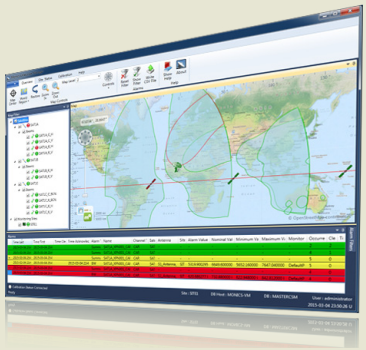
- Scales from a single monitoring site equipped with one measurement device all the way to multi-site configurations with several measurement devices on each site
- Maximize existing capital investments by using Monics DSP technology in conjunction with existing spectrum analyzers and related test and monitoring peripherals
- Simplify monitoring and anaylsis with a single platform that handles any number or type of frequency bands

Support On-going Operations and Lower Maintenance Costs

The Monics Net system was designed to evolve to meet changing technology requirements and to be cost-effective and easy to maintain.

- Minimizes maintenance effort and time – built on Commercial Of the Shelf (COTS) hardware that is easily supported by in-house staff
- Highly configurable with numerous architecuture options to support expansions and upgrades through the life of the system
- Provides dedicated and experienced support staff that deliver remote assistance to quickly fix issues

Need Enterprise Level Monitoring?



Monics Enterprise offers even more capabilities:

- Reduces time from issue recognition to resolution with map based displays
- Simplify the monitoring of HTS spot beams, large regional or hemi beams and clearly depict their relationship to their corresponding monitoring sites
- Optimize workforce productivity and enhance security by controlling Monics user access for applications and space segment visibility
- Enhance customer visibility by providing controlled Monics access to monitor satellite bandwidth

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