

# 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.

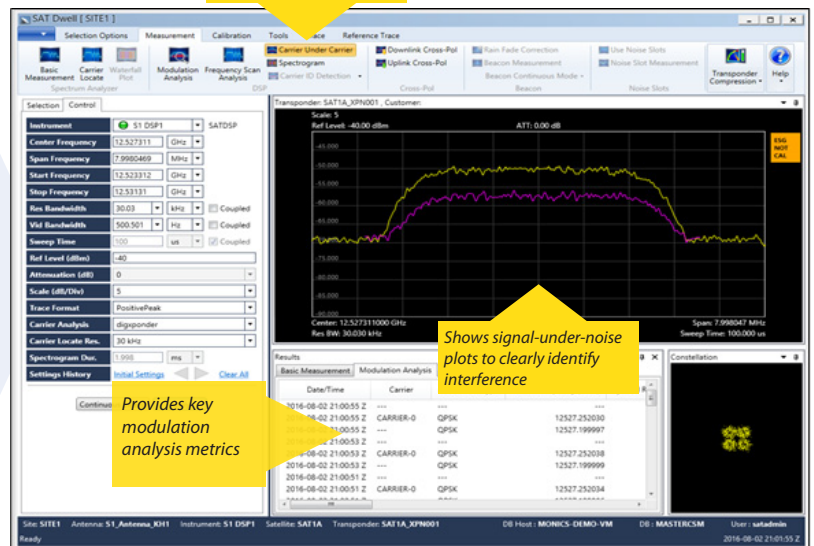
## Protect Revenue with Advanced Interference Identification Capabilities

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 bandwidth without service interruptions
- Provides time domain analysis capabilities including modulation type, symbol rate, measured Es/No, Eb/No and optional FEC detection
- 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

Perform Carrier Under Carrier analysis with a click of a button

| 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.

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

## 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 immediately displayed and alerts sent to an operator when abnormal 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

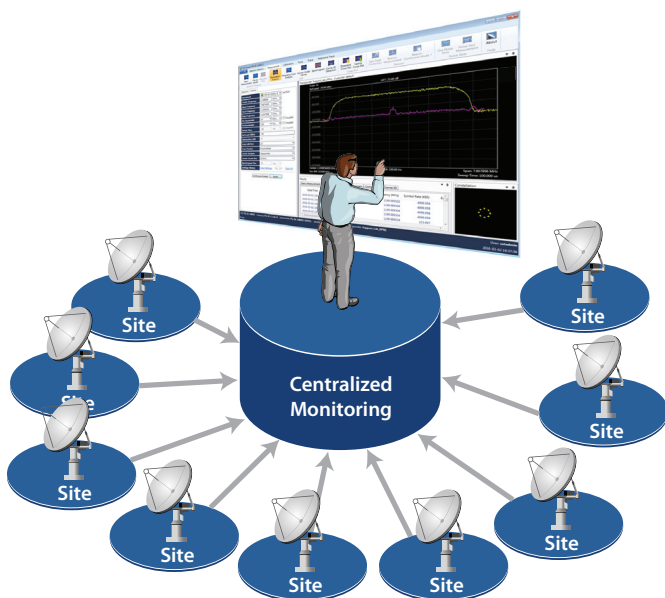
Monics Net provides operators the ability to manage globally distributed multi-site teleports, earth stations or gateways from a central NOC location increasing operational efficiency and reducing the time needed to manage and protect RF spectrum.

- 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.

- 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



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

## 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

- Maximize existing capital investments by using Monics DSP technology in conjunction with existing spectrum analyzers and related test and monitoring peripherals
- Simplify monitoring and analysis 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 Off the Shelf (COTS) hardware that is easily supported by in-house staff
- Highly configurable with numerous architecture 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