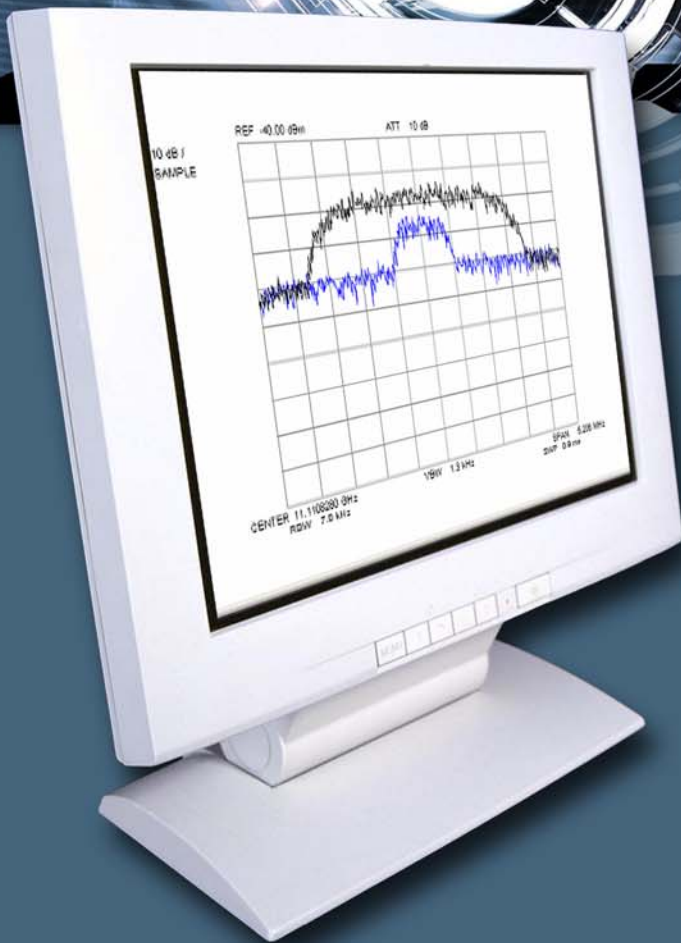


# SAT Corporation

Automatic Monitoring and Interference  
Detection Using Advanced Measurement  
Instruments and Software



## Monics Satellite Carrier Monitoring System

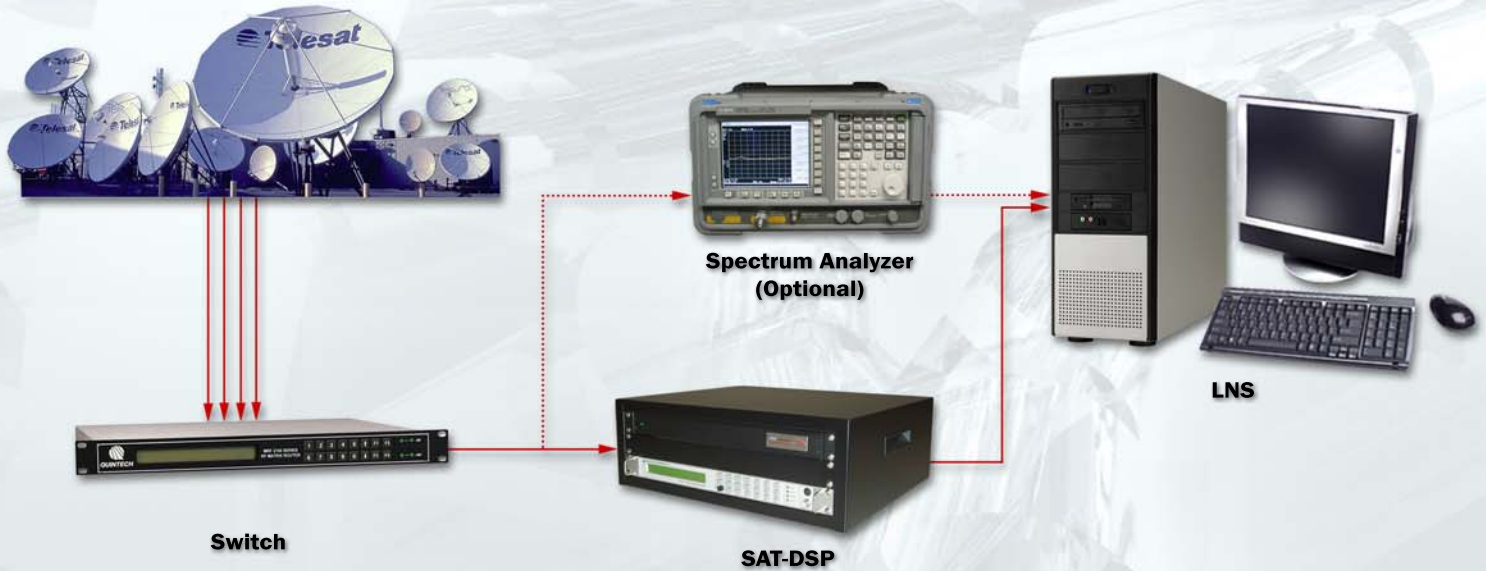
*Single Site Monitoring or Global  
Networks*

**Satellite Communications Monitoring Tools for the Satellite  
Operator and Telecommunications Provider**

# MONICS

SAT Corporation's Monics Satellite Carrier Monitoring System is a hardware and software solution designed to watch over satellite up and downlink performance. It is configurable from the small operators needs (Monics CSM) to applications that necessitate multiple monitoring sites worldwide and Network Operations Centers (NOC).

## Remote Monitoring Site

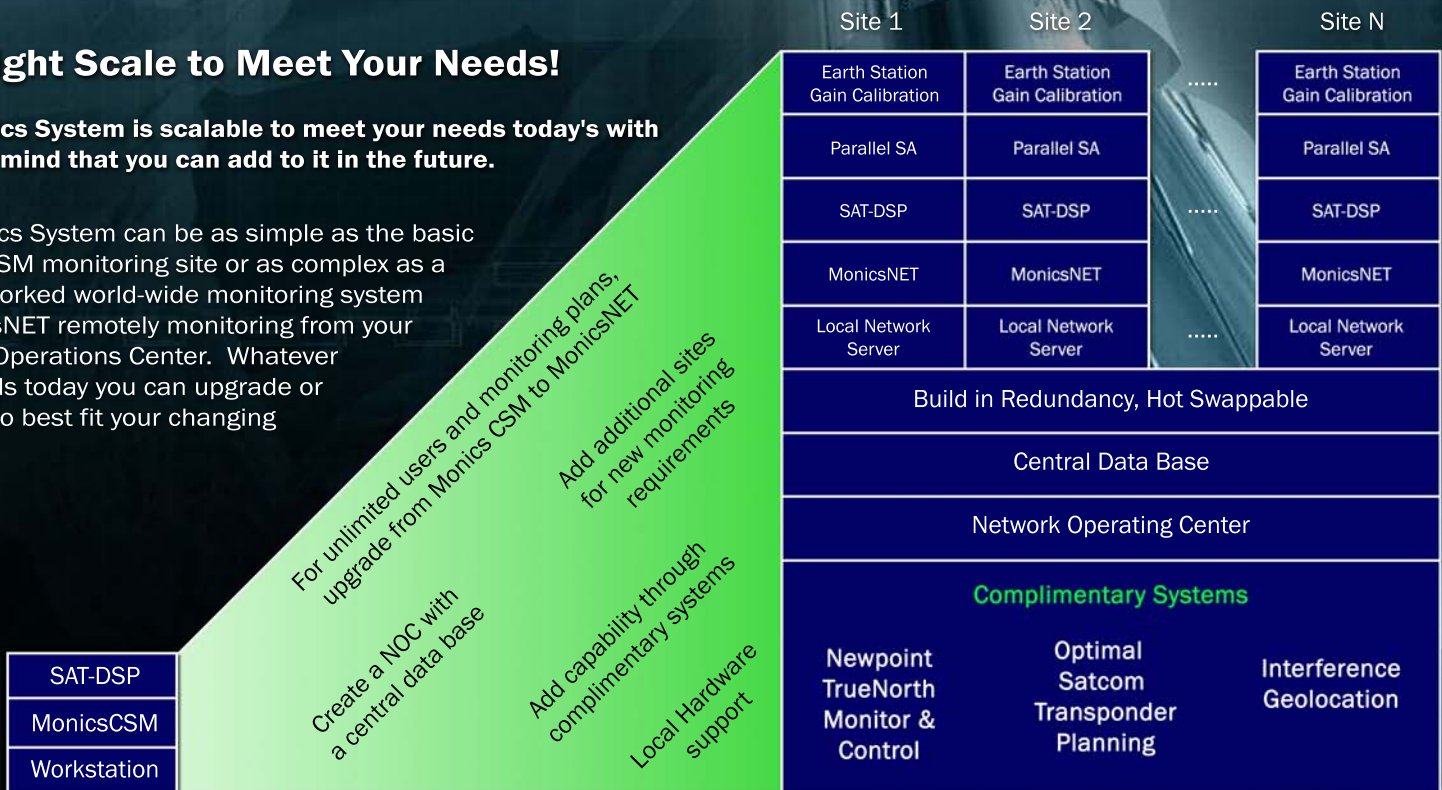


The Monics System can be configured with either a standard spectrum analyzer, SAT DSP or both as the primary measurement instrument. Using SAT Corporation's advanced Digital Signal Processing (SAT-DSP) techniques, Monics is able to find and display interfering carriers, even when there is a Carrier-Under-Carrier condition.

## The Right Scale to Meet Your Needs!

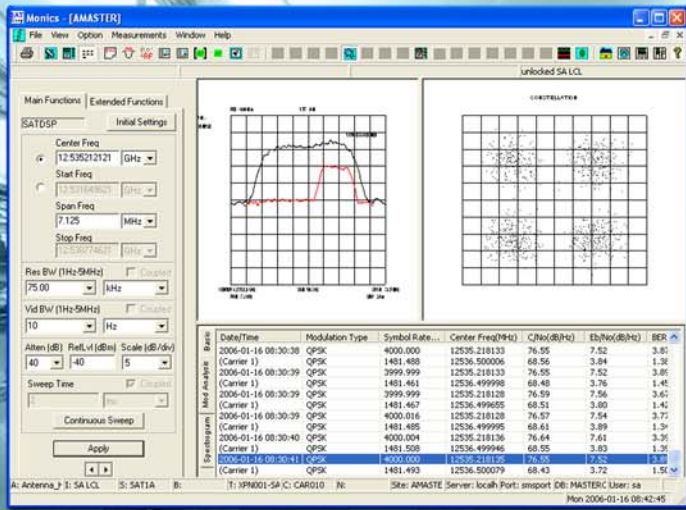
The Monics System is scalable to meet your needs today's with peace of mind that you can add to it in the future.

The Monics System can be as simple as the basic Monics CSM monitoring site or as complex as a fully networked world-wide monitoring system of MonicsNET remotely monitoring from your Network Operations Center. Whatever your needs today you can upgrade or add to it to best fit your changing needs.



Basic CSM System

Mutiple Site MonicsNET System

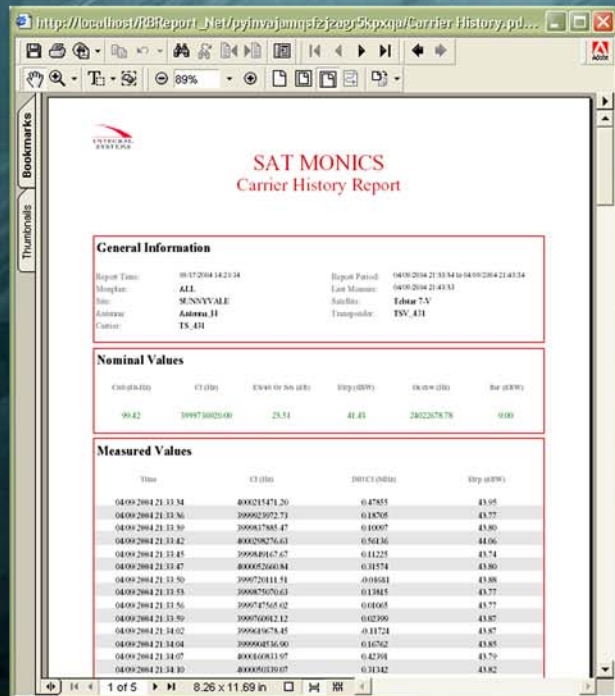


The Monics spectrum analyzer like display is shown with a “Carrier-Under-Carrier” condition. Along with the trace, the main carrier and interfering carrier characteristics including CF, BW, Modulation Type and Symbol Rate can be displayed simultaneously.

Feature Comparison	MonicsCSM	MonicsNet
<b>Integrated Alarm Panel</b>	Yes	Yes
<b>Noise Slot Measurement</b>	Yes	Yes
<b>Frequency Drift Correction</b>	Yes	Yes
<b>Transponder Surveillance</b>	Yes	Yes
<b>RF Subsystem Type</b>	SA & SAT-DSP <sup>1</sup>	SA & SAT-DSP <sup>1</sup>
<b>Rain Fade alarm</b>	No	Yes
<b>Monitoring sites</b>	3 <sup>2</sup>	Unlimited
<b>Automatic Monitoring Limit</b>	500 Carriers	Unlimited
<b>RF Measurement Channels</b>	1	Unlimited
<b>Measurement and Trace storage</b>	1,000,000 Carriers per site	Unlimited
<b>Simultaneous monitoring plans</b>	1	Unlimited
<b>Simultaneous Users</b>	Five	Unlimited
<b>Earth Station Gain Calibration</b>		Option
<b>Uplink Power Control</b>		Option
<b>Antenna Pattern Verification</b>		Option
<b>Newpoint Compass Interface</b>		Option
<b>Optimal Complan interface</b>		Option
<b>Geolocation Interface</b>		Option
<b>Webwatch</b>		Option

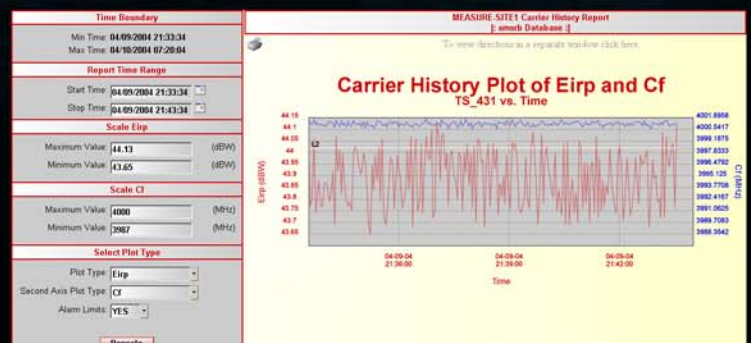
**Notes:**

1. SAT Corporations Digital Signal Processor
2. Depends on customer’s ability to manage individual sites without adding Central Database Server (CDS)



**Monics Reports**

Essential to supervising satellite communications are reports: Tabular and graphic history reports are provided for any measured parameter. In addition, Monics “Archive Viewer” tool replays spectral traces, the interfering carrier’s trace and its time-domain characteristics (Modulation type, Symbol Rate and Eb/No).



# Monics Satellite Carrier Monitoring System

The ultimate monitoring system for any size satellite operator or telecommunications provider

## Satellite Operators and Telecommunication Providers

Perceptive Satellite Operators and sophisticated telecommunication providers select Monics because they want the best quality of service for their customers. Monics can be configured to support monitoring applications as simple as one monitoring site or as expansive as a global network.

**Efficient User Interface:** Monics user interface is designed to minimize the workforce devoted to monitoring; for example, there are a host of features to minimize false alarms; extensive use of point-and-click operation, automatic monitoring is simple to configure

**Simultaneous Automatic and Manual Monitoring:** While the operator is performing a carrier "line-up" or other manual process, the automatic monitoring process continues to evaluate the frequency spectrum. These two processes -automatic and manual- are interleaved to allow one monitoring channel to serve both functions.

**Automatic Frequency Plan Monitoring:** Automatic monitoring compares the actual frequency spectrum to the expected frequency plan. Integrated with Optimal Satcom's Complian Transponder Planning software, the actual spectrum and planned spectrum are displayed simultaneously. Monics alerts the operator: when the noise floor or guard bands are abnormal; total transponder power or any segment of the transponder is abnormal.

**Automatic Performance Monitoring:** Automatically verifies normal carrier and transponder values by comparing actual to expected performance: EIRP, Bandwidth, Center Frequency, Carrier-to-Noise, Modulation Type, Symbol Rate and Eb/No

**Manual Monitoring:** During carrier line-up, co-pol and cross-pol carriers are displayed simultaneously, thus carrier are rapidly brought on-line without causing interference.

**Open database interface:** Monics can accept frequency planning information from the user's database. Changes to the database are immediately sent to the monitoring sites where automatic monitoring can continue using the updated information.

## SAT Corporation

SAT Corporation has delivered Communications Satellite Monitoring systems to the worlds leading satellite operators including: Eutelsat, Hellas SAT, Hispasat, New Skies, Japan Satellite, Loral-Skynet, Pakistan Satellite, SES-Astra, SES-Americom, Shin Satellite and T-Systems. In addition, preeminent telecommunications providers using SAT CSM include: AT&T, Arrowhead, CNN, Etisalat, Spacelink, Telefonica and various US Government organizations. Equipped with SAT CSM these companies provide outstanding quality of service for their customers. SAT Corporation is a wholly owned subsidiary of Integral Systems, Inc. (ISI) a leading provider of satellite ground systems.

## SAT Alliance

THE SAT Alliance was formed to offer the industry with a more complete product; a product with an unprecedented levels of integration. Through the SAT Alliance, the customer may procure individual products with the assurance that when put together, they will work together. Each product represents the best-in-class in the industry. When integrated, they offer the customer cost-effective, high-performance, complete system solutions.

The SAT Alliance promises that the following products can be integrated together to provide a more complete satellite ground segment:

- SAT Corporation Monics Satellite Carrier Monitoring System
- Newpoint Technologies Compass Network Management System ([www.newpointtech.com](http://www.newpointtech.com))
- Optimal Satcom's Complian Capacity Management Tool ([www.optimalsatcom.com](http://www.optimalsatcom.com))
- Integral Systems Epoch TT&C ([www.integ.com](http://www.integ.com))

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