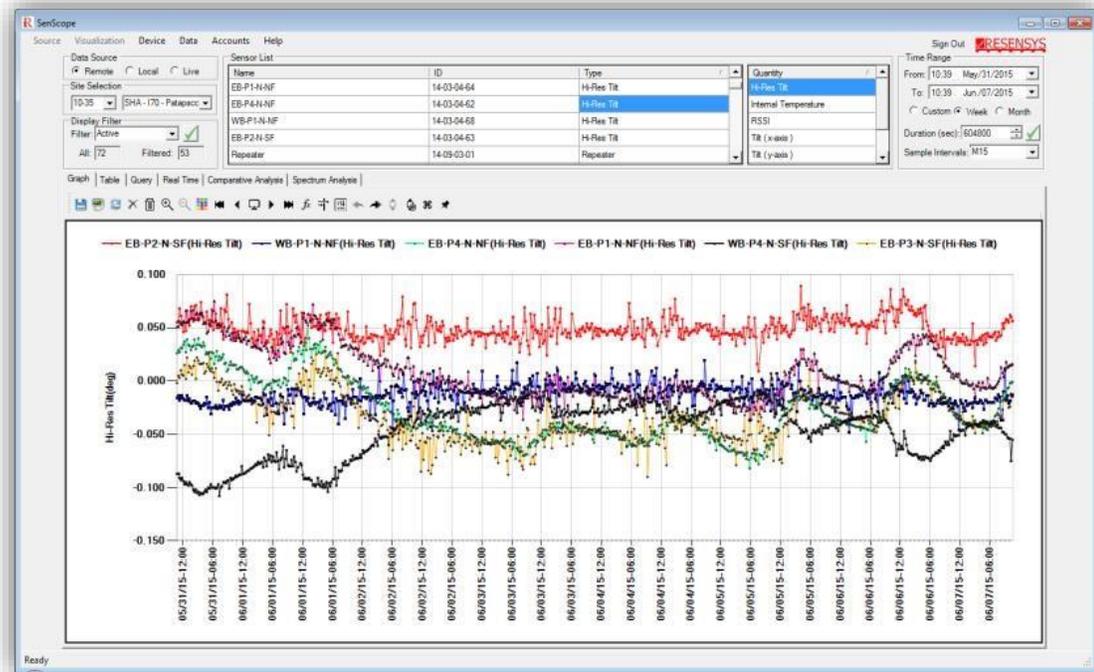




Ultra-Low Power Precision Sensing & Wireless Communication

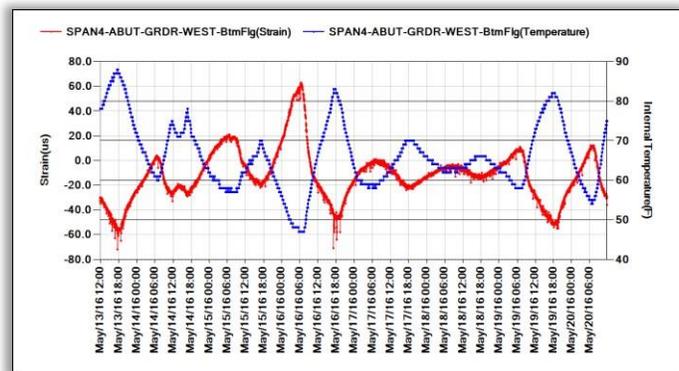
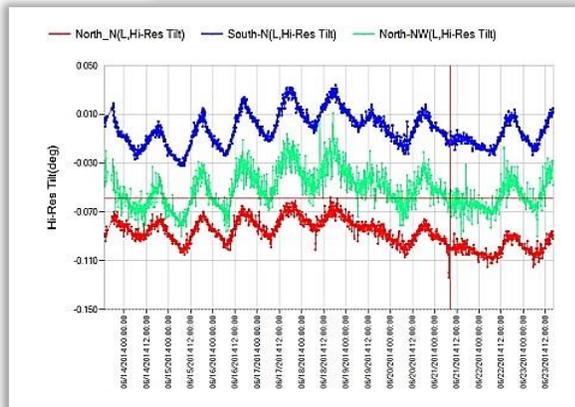
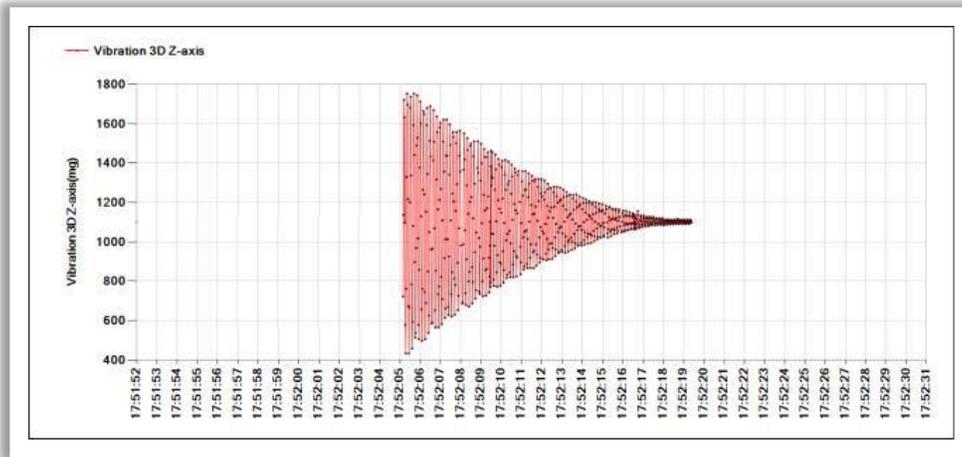


SenScope™

Software Datasheet (V.1.0)



SenScope™ Real-time Monitoring Software UltraLow Power Sensing and Remote Wireless Communications



The need for a powerful data analyzing tool

Many factors need to be considered to evaluate the health of a building or a bridge. Temperature, strain, tilt, vibration and even wind speed should be included in the inspection. Only checking the value stored in the server is far from a convenient or efficient way for monitoring the structural health. A good sensor network should have good software to visualize and help analyze the collected data. Therefore, Resensys team developed multi-functional and easy-to-use software to achieve this goal: SenScope™.

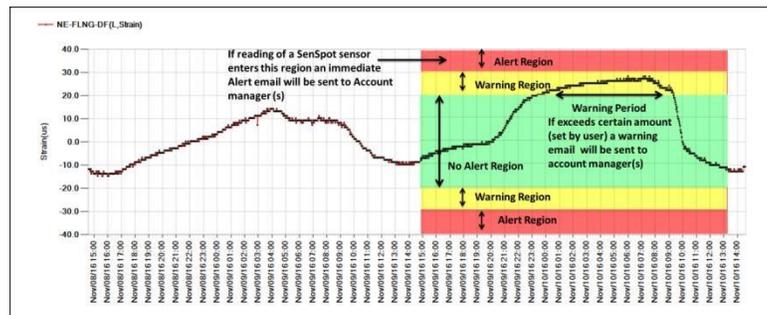
A multi-functional software package for data visualization, analysis, alert and sensor configuration

SenScope™ is a software package designed for Resensys SenSpot™ and SeniMax™ system, conducting both real-time monitoring and longterm structural health diagnosis. SenScope™ is capable of converting large volumes of data into specific structural diagnostics information. The information generated by SenScope™ facilitates decision-making and accelerates the course of action for maintenance/repair.

Key Features

★ **Visualizing data:** SenScope™ shows the data from the remote server or the local SenSpot™/SeniMax™ in a user-friendly working panel.

★ **Automated alert generation and notification:** When the measured quantity exceeds the threshold, SenScope™ automatically generates alert in the system and notify the user with email or text messages.



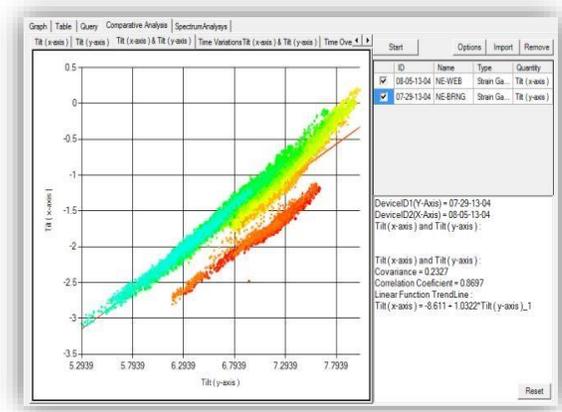
Feature	Description
Secure internet-based interface	Using a secure “SSL” connection, each user can connect to highly secure cloud database of Resensys. The database can be hosted in user’s local servers if needed.
Visualizing Data	Plot the data with respect to the time. The data source can be either real-time data collected from SenSpot sensors or the archived data from the remote server.
Communication with SenSpot™ sensors and SeniMax™ gateway	In the Local/Live mode: Show the raw data transmitted from SenSpot sensors. Configure the SenSpot sensors and the SeniMax with Air Update. In the remote mode: Configure the SenSpot sensors through the server with Remote Configuration.

★ **Data Processing Service:** SenScope™ shows the statistical and spectrum properties of selected data. Also show the relationship between two different quantities.

★ **Report Automation:** SenScope™ exports the data of several SenSpot sensors in the form of images and spreadsheets according to user's need.

★ **Data Hosting:** SenScope™ stores data in Resensys's secured cloud servers and backed up periodically. Data can be accessed using Secure Sockets Layer (SSL) from anywhere. Data can be exported to Excel, TXT, CSV, and XML formats.

★ **Air Update / Remote Configuration (advanced function):** Modify the setting of SenSpot™ sensors (like transmission interval, local address etc.). Some limits may apply.



Resensys SenScope™ Real-time Monitoring Software Capabilities

Data Filter	<p>Use filters to process data before plotting them:</p> <ul style="list-style-type: none"> Filtering the graphs (smoothing) and extracting the trends; Removing the trends ; Removing the outliers ; Showing the spikes (transients, e.g. caused by passing trucks); Down-sampling of data; Modifying chart formats, types, saving and exporting graphs.
Comparative Analysis	Use two quantities as x and y axis and plot the data. Show the relationship between them and the change of the relationship over time (time change is shown with color change).
Spectrum Analysis	Use Fast-Fourier-Transformation to process a period of data to show the natural frequency of the structure.
Statistical Analysis	Show the statistical properties of the readings of a single or a group of SenSpot sensors (e.g., maximum, minimum, median, standard deviation in a time range).

Alert Generation	<p>Immediate Alert Services: Facilitate detection of critical failures, when immediate action is needed. Alert administration is conducted through text message and email notifications.</p> <p>Regular Alert Services: Facilitate detection of non-critical failures, when immediate action is not needed. Emails with detected alerts are administered regularly (daily, weekly, or monthly).</p> <p>Types of Alerts: Threshold-based alerts, regression based alerts, disconnections alerts (communication error).</p>
Report Automation	Export the data of a set of SenSpot sensors. Data will be exported to Excel, TXT, CSV, and XML formats. Other formats can be added if needed.

For more information

Please refer to the SenScope™ user manual on the [Resensys Website](#) for more detailed information.