

Quick Guide for SenScope[™]

Ultra-Low Power Precision Sensing & Wireless Communication

Installing SenScope™

1. Open the box to find the USBSink[™].

Download the SenScope[™] software and other required software packages from the following links. <u>http://www.resensys.com/Software/SenScope/SenScope.zip</u>



.Net framework 4.7 runtime

package: <u>https://dotnet.microsoft.com/download/dotnet-framework-runtime</u>

- 2. OpenXML2.5 package: locate in the "resources" folder under the SenScope™ installation folder.
- 3. Install the SenScope[™] and the packages.
- 4. Insert the USBSink[™] to the computer.
- 5. Install the Driver for the USBSink[™]. When the Internet is available, the installation should be completed by Windows automatically. If not, the installation file is included in the "resources" folder under the SenScope[™] installation folder.

Preparing SenSpotTM and SeniMaxTM (if available)

1. For SenSpot[™], open the cover and put in a new battery (CR123) if there is no battery in it.

2. For SeniMax^M, open the main box (white) and the cover of the inside box (black). Then turn on the switch.



3. See the videos on Resensys's YouTube Channel for additional help. The link is:

https://www.youtube.com/channel/UCkq-Woo1P4xY1EjXL-Ni7vw

4. Contact Resensys if any other problem exists.

Viewing the data in the live/local mode

The only difference between the live mode and the local mode is that in the local mode the data (packets from SenSpot[™]) are stored in a local database on the computer's hard drive so that SenSpot[™] data are accessible after SenScope[™] is closed. However, in the live mode the data are deleted after the SenScope[™] is closed.

• Opening the port

 Open SenScope[™] and switch to offline mode by pressing the middle button at the top-left corner of the window (the Internet access is not required and the username and the password are not needed here).



- 2. Select "Local" mode or "Live" mode from the "Data Source" area (top-left corner).
- 3. Switch to the" Real Time" tab if it's not the current tab.

able Query Real Time Comparative Ani

Select the COM port the USBSink[™] is connected to in the "COM Serial Port Setting" area (bottom-left corner). If the port number is unknown, go to the device manager of Windows to look it up.

COM Serial Port Settings				
COM Port: Baud Rate: Parity: Data Bits: Sto			Stop Bits:	
СОМЗ 💌	115200 💌	None 💌	8 🔻	One 💌

4. Make sure there is at least one working SenSpot[™] or SeniMax[™] near the USBSink[™]. Click "Open" button (top-left corner). The packets should appear in the display area and the device IDs should appear in the "Sensor List" after some time (according to the transmission interval of the SenSpot[™], it may take as long as 6 minutes).

Packet Generator and Fast sampling mode

It is recommended to switch to fast sampling mode during field deployment unless otherwise instructed. Packet Generator can send specific packets at a fixed rate. Like diagnostic mode it is used mostly for debugging. An application for the function is to make the SeniMax[™] enter the fast sampling mode in which the transmission interval (of the SenSpot[™]) can be shortened to a desired value to show the data more frequently. This mode is useful in the deployment to verify the connection between the SenSpot[™]

R AirUpdate		_		×
SenSpot SeniMax Diagnostic Packet Generator				
Packet Count: Packet Interval (msec):	Stop	s	tart	
TX Packet (Hex):				
Generate SeniMax Interval Update Command				
SeniMax Device ID:				
Transmission Interval (sec):				
Generate				

and the SeniMax[™].

- 1. Open the "Packet Generator" tab in the Air Update panel.
- 2. Clear the "TX Packet (Hex)" area (choose any contents and hit "delete" on the keyboard).
- 3. Input the Device ID, Site ID and the new transmission interval. The interval should be a multiple of 6

seconds! The interval of 30s is recommended if there is no specific requirement from the customer.

Generate SeniMax Interval Update Command				
SeniMax Device ID:	00-00-16-07			
SeniMax Site ID:	16-07			
Transmission Interval (sec):	360			
	Generate			

- 4. Click "Generate" button to generate the command packet.
- 5. The packet should appear in the "TX Packet (Hex)" box.

TX Packet (Hex):
FF FE FF FE FE FE 20 01 00 00 16 07 31 00 16 07 00 00 00 3C 31 00 00 00 00 00 0D 0D 0D 0D 00 00

6. Input the packet count and the packet interval. These parameters determine the command packets' number and frequency sent from the computer. It is recommended that the packet count be some large number (like 2000) and the packet interval be 500ms.

Packet Count: Packet Interval (msec):

- Click ________ and plot the quantity "Tx Interval" of the SeniMax[™] in the live mode. Please refer to the SenScope[™] User Manual for how to show the data in the SenScope[™].
- 8. Check the "Tx Interval". As soon as the "Tx Interval" changed to the desired value, click
- 9. After finishing the test, remember to change the "Tx Interval" back to normal value since the power consumption of the SenSpot[™] is high in fast sampling mode.

• Viewing the data and graphs in live/local mode

- 5. Switch to the "Graph" tab.
- 6. Select one or several devices in the "Sensor List".
- 7. Select the data type in the "Quantity" table.

Source Device Data Accounts Help						Sign In MILISLINGIS
Data Source	Sensor List				Time Range	
C Remote C Local C Live	Name /	ID	Туре	Quantity	From:	11:25 Oct /06/2016
	Name it now	00-00-16-07	Gateway SeniMax	Internal Temperature	To:	11:27 Oct/06/2016
Serial Port	Name it now	01-01-01-01	High Rate Strain	RSSI		Custom C Week C Month
Close Config Pause	Name it now	14-03-05-12	Hi-Res Tilt	Vibration 3D X-axis		
	Name it now	15-03-02-27	Displacement (2")	Vibration 3D Y-axis	Duration (sec):	100 🗄 🖌
Display Filter	Name it now	15-03-05-94	Vibration Sensor	Vibration 3D Z-axis	Sample Intervals:	All Points
Filter:	Name it now	15-03-05-99	Strain Guage	Volt		
All: Filtered:	Name it now	15-03-06-83	Displacement (1")			
, ,	Name it now	15-03-07-52	Strain Guage			
	Name it now	15-03-08-71	Hi-Res Tilt	-		
Graph Table Query Real Time Comparative An	alvsis Spectrum Analysis Repor	Generator				
8. Click to dra	w the figure.	ternal Temperature)				I
9. The display du	uration can	be adju	usted by	entering the des	ired tii	me duration in
Duration (sec):	100	<u> </u>	. Click	😫 to apply the char	nge.	ń
10. The Y-Axis range i	s automatical	y adjusted	l by defaul	t. If it's in the Manual A	xis mod	e, click 🖁 and it
will become grey	🗘 , indicatir	g the Auto	o Axis mod	e is on. Click 🏾 🙆 to sv	vitch to	Manual Axis mode

and adjust the range manually by typing the range in the text boxes at the bottom side of the window.

Left Axis Max: 20 📫 Left Axis Min: 20 📫

Right Axis Max: 58 🕂 Right Axis Min 56 📫

11. Click \square to delete all the figures or click \times to delete the figure of the currently selected item.



Screenshot of the live mode

Viewing the data in the remote mode

Remote mode is for viewing the data from the remote server rather than from the local devices. Therefore, the Internet access is necessary. Also, the username and the password are needed. Should the user not have them, please contact Resensys.

- 1. Enter the username and the password provided by Resensys then click "OK".
- 2. Choose the "Remote" mode in the "Data Source" area
- 3. Select the desired Site ID from the dropdown menu.
- 4. In the Time range area, enter the time period of the data.
- Select the devices and the data type to create a figure similar to the Live/Local Mode.





Time Range		
From:	10:31	Oct /04/2016 🔹
To:	10:31	Oct /05/2016 🗾
۰	Custom	C Week C Month



6. Remember to click "Refresh" 😂 after changing the time period to apply it.

Screenshot of the remote