Spectrum Analyzer

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In the "Spectrum Analyzer" section, you can perform a deep analysis of the radio emissions in the environment where the unit is placed. The unit scans the radio spectrum on all available frequencies. In order to obtain the information as accurate as possible, the scanning process may take a while.

> ⊘ **CAUTION**
>
> When running spectrum scan on a unit accessible via the RF interface, connection will be lost during scan time (the radio-link will be disconnected). Use "**Last Snapshot**" button to see scan results.
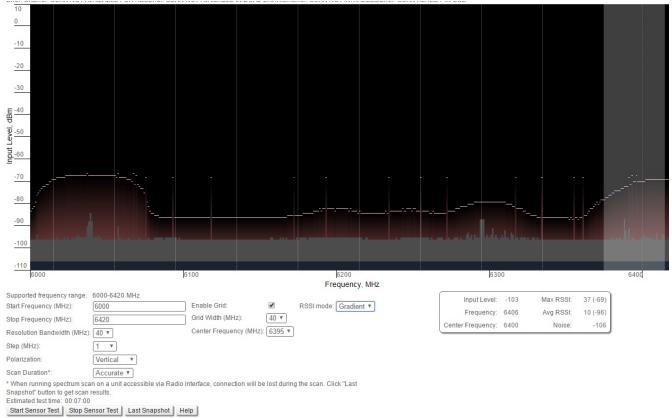

Figure - Spectrum Analyzer

> ⚠ **NOTE**
>
> Spectrum Analyzer scanning is performed on the band width equal to the current channel width. For example, RSSI value at the 5500 frequency on the 40 MHz bandwidth is a RSSI in the range from 5480 to 5520 MHz.

The following parameters are available in order to operate the Spectrum Analyzer:

Parameter	Description
Start Frequency	• Set the first frequency for scanning (in MHz)
Stop Frequency	• Set the last frequency for scanning (in MHz)

Resolution Bandwidth	• Bandwidth (in MHz) • The sacnning performs in the current bandwidth, the value is not selected
Step	• Set the scanning frequency step (in MHz) • It is recommended to set 1 MHz step value to get more precise scanning results

Polarization	• Polarization, the possible options are:
	  • Vertical
	  • Horizontal

Scan Duration	• Set the time period for the scanning process (in seconds), the possible options are:
	  • Brief
	  • Accurate
	• After the end of this time period, scanning is stopped and the radio interface will be back to its normal mode operation

Enable Grid	• Mark/unmark the corresponding checkbox to display/hide the grid lines and highlight the special frequency channel on the scan output • The highlighted frequency channel can be used to mark the channel which the device is currently working on or which it plans to use
Grid Width	• Set the bandwidth value for the highlighted frequency channel (in MHz)
Center Frequency	• Set the central operating frequency for the highlighted frequency channel (in MHz)

RSSI mode	• Select the gradient-color type for the "Max RSSI" values to be displayed on the Spectrum Analyzer output screen
	• The options are:
	  • Normal (by default)
	  • Gradient

Table - Spectrum Analyzer

Start/stop Spectrum Analyzer by clicking the «**Start Sensor Test**»/«**Stop Sensor Test**» buttons.

By clicking the «**Last Snapshot**» button, you get the final scanning results. The most common usage of this feature is when you perform a spectrum scan at the remote unit on the other side of the radio link. When running a spectrum scan at such a unit (accessible via the RF interface), connection to this unit will be lost for a scan time. "Last Snapshot" option allows viewing scan results when the connection gets up again.

When you run spectrum scan on a local unit and the link is interrupted, the remote unit will not disappear from the spectrum picture. So you should silence the remote unit in order to have a real picture without it, otherwise you will always see noise signal on the operating frequency generated by the remote unit.

You can get detailed information about the scanned radio signals on a specific frequency. Just point a cursor on the needed frequency and you will see a hint with exact:

- Input level (dBm),
- Frequency (MHz),
- Center Frequency (MHz)
- Max RSSI (dBm)
- Avg RSSI (dBm)
- Noise (dBm).