Spectrum Analyzer menu

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In the "Spectrum Analyzer" menu, 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.
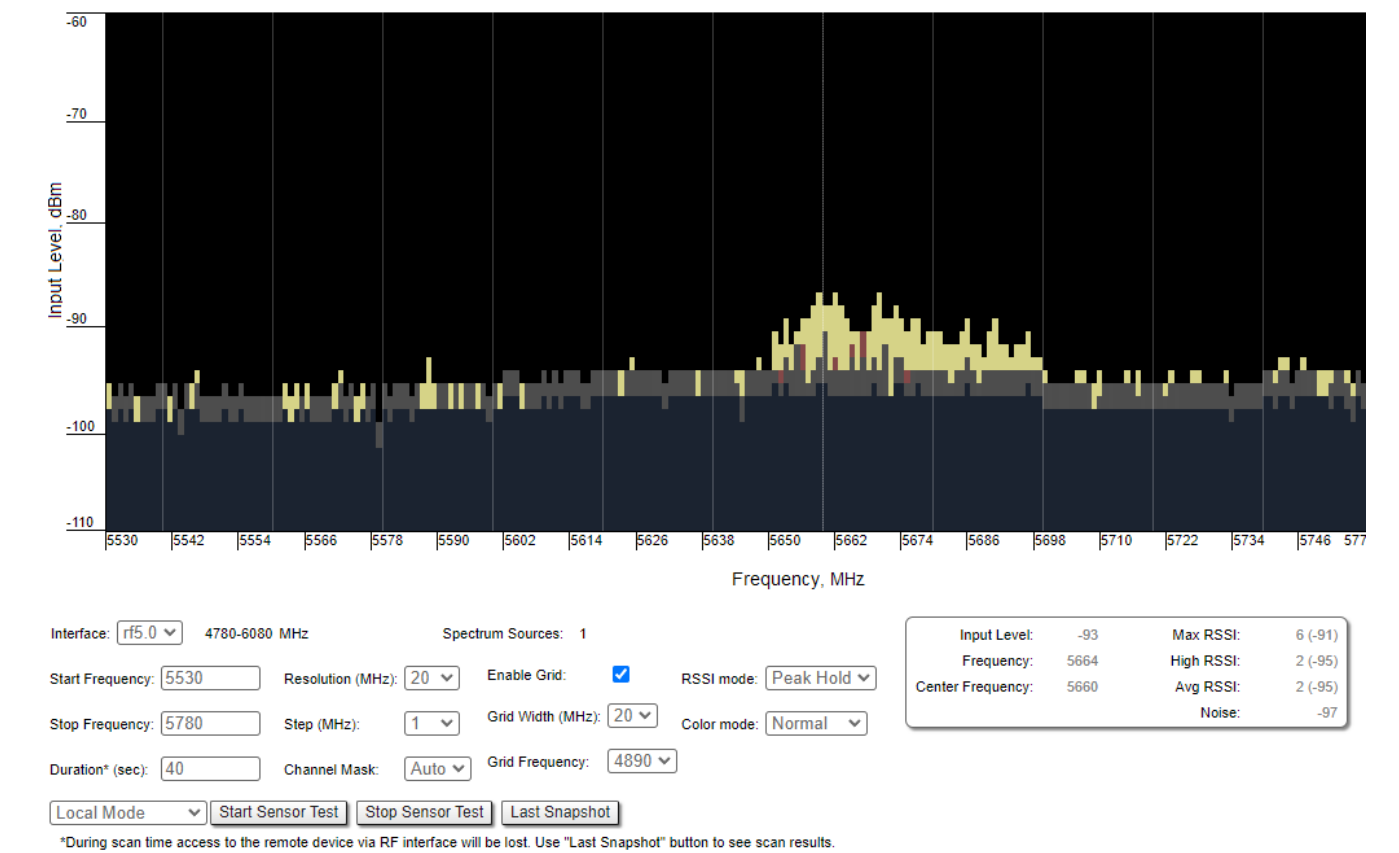

Figure - Spectrum analyzer

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

Parameter	Description
Interface	• rf5.0 radio interface is the only option available, but it is showed for the backward compatibility with the dual radio legacy products
Start Frequency	• Set the first frequency for scanning (in MHz)
Stop Frequency	• Set the last frequency for scanning (in MHz)

Band	• Set the bandwidth (in MHz)
Step	• Set the scanning frequency step (in MHz) • It is recommended to set 1 MHz "*step*" value to get more precise scanning results
Channel Mask	• Select which antenna to be used for scanning the radio environment • "*Auto*" parameter is set by default. In this case scanning is perfomed by both antennas • "1" - scanning is perfomed by antenna "1" • "2" - scanning is perfomed by antenna "2" • Parameter "3" means scanning is perfomed by both antennas
Scan Duration	• Set the time period for the scanning process (in seconds) • 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)
Grid Frequency	• Set the central operating frequency for the highlighted frequency channel

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
	  • Max Hold – holds the maximum signal values at a given point
	  • Peak Hold – holds the peak signal values at a given point

Scan mode	• "*Local mode*" – scanning is performed only on the local device. • "*Combined mode*" – Scanning is performed simultaneously on all devices in the sector. The "**Last Snapshot**" button will display the blended result

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 Signal level (dBm), Frequency (MHz), Noise Floor (dBm), indicators of RSSI (dBm), High RSSI (dBm), Max RSSI (dBm) and their values in dB. High RSSI allows you to estimate the signal sources number, if the value is significantly different from the average RSSI, then there are several sources of interference.