

2.4 GHz Spectrum Analysis

The workhorse spectrum analyzer for Wi-Fi, MetaGeek's Wi-Spy 2.4x has become the industry standard for 2.4 GHz band troubleshooting. Packed with capability, versatility and portability, it helps users see the invisible – so they can zero-in on and mitigate RF interference and wireless setup problems.

Since the 2.4 GHz band is increasingly crowded, the need for quick and efficient spectrum analysis is more important than ever. An easy to use, portable spectrum analyzer is needed to properly deploy wireless networks, and to keep them up-and-running.

The Wi-Spy 2.4x provides deep visibility into wireless environments – to discover noisy channels, find interfering devices, and enable optimum WLAN speed and performance.

Compact and quick to start-up, Wi-Spy 2.4x is easily carried with a laptop for mobile troubleshooting. Bundled with Chanalyzer 4, Wi-Spy 2.4x is a no-hassle addition to any wireless networking toolkit that includes many innovative features for complete RF visibility into the 2.4 GHz band.

Key Features

- **2.4 GHz (802.11 b, g, and 2.4 GHz n)**
- **RP-SMA Antenna Connector**
- **Fine Resolution**
- **Bundled with Chanalyzer 4**
- **Low Amplitude Sensitivity**
- **Full 64-bit Support**



Technical Specifications

Maximum Zoom:	1.0 MHz
Capture Limit:	Dependant on hard disk space
Frequency Range:	2.400 to 2.495 GHz
Amplitude Range:	-100 dBm to -6.5 dBm
Amplitude Resolution:	0.5 dBm
Resolution Bandwidth:	53.571 to 750.000 KH
Sweep Time*:	507 msec (default)

* Sweep Time shortened or lengthened according to Zoom and Resolution settings.

Requirements

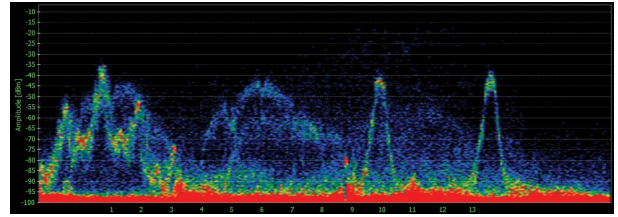
OS	Windows 7, Vista or XP (SP3)
Mac OS X Virtualization	VMware Fusion, Parallels
Framework	Microsoft .Net 3.5
Screen Resolution	1024 x 768 (or greater)
RAM	1 GB (Rec. minimum)
Processor	1 GHz (Rec. minimum)
Wireless Card	Windows Zero Configuration (WZC)

Supported Software

Chanalyzer Pro
Chanalyzer 4
Chanalyzer Lab

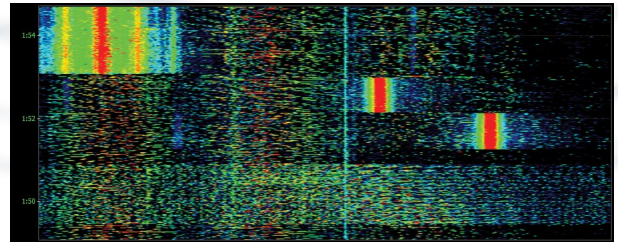
Density View

The Density View displays raw spectrum data by frequency and amplitude point over a user-defined timeframe. The brighter the color, the more RF activity present. Density View is great for catching transmitters over time, and for finding interference trends.



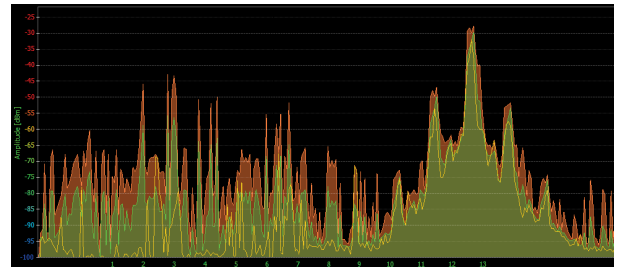
Waterfall View

The Waterfall View displays RF activity over a defined timeframe in a rolling “waterfall.” The brighter, or more red the color, the noisier the frequency. The Waterfall View shows when interference occurred and its duration.



Planar View

The Planar View graphically displays the maximum, average and current RF activity on a Density graph. The Planar View is a staple of traditional spectrum analyzers, and is included in Chanalyzer Pro with user-defined colors for complete customization.



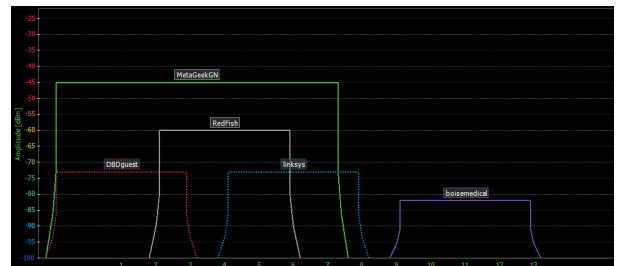
Wi-Fi Channels Table

The Wi-Fi Channels Table plots average, current and maximum values, as well as the Noise Floor reading and number of placed Access Points to calculate a “grade” for each Wi-Fi or ZigBee channel.

Channel	Grade	Duty Cycle	Average	Current	Noise Floor	Access Points	Max
1	78.0	8.2%	-64.5	-50	-66.0	3	-50.5
2	78.0	8.3%	-64.5	-50	-66.0	0	-50.5
3	80.1	8.5%	-65.0	-59	-66.0	0	-51.0
4	79.5	8.6%	-64.0	-72	-55.5	0	-50.5
5	78.7	8.3%	-63.0	-40	-55.5	0	-49.0
6	75.9	9.6%	-63.0	-75	-55.0	1	-49.5
7	74.2	9.7%	-63.0	-79	-44.0	1	-49.5
8	86.1	23.6%	-54.0	-75	-66.0	0	-65.5
9	38.8	24.1%	-55.0	-75	-47.5	0	-48.0
10	36.5	22.3%	-55.0	-72	-47.5	0	-48.0
11	47.2	21.1%	-55.0	-72	-48.0	0	-48.0
12	68.2	14.1%	-55.5	-72	-41.5	0	-48.5
13	92.8	2.2%	-77.5	-72	-47.0	0	-48.5

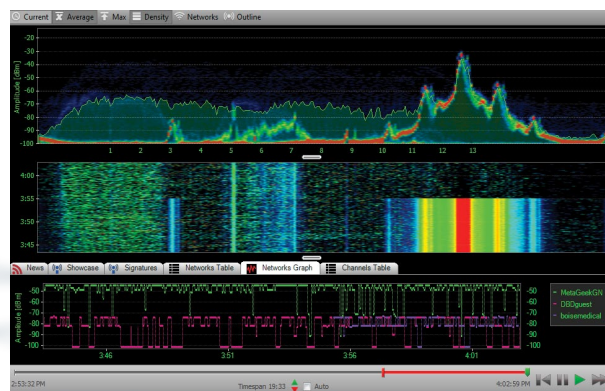
Wi-Fi Overlays

Using the wireless NIC in the computer, Chanalyzer Pro collects Wi-Fi data such as SSID, RSSI and channel of networks in the area. Data is overlaid on a Density View to provide a correlation between known Wi-Fi sources and everything else (non-Wi-Fi) transmitting in the band.



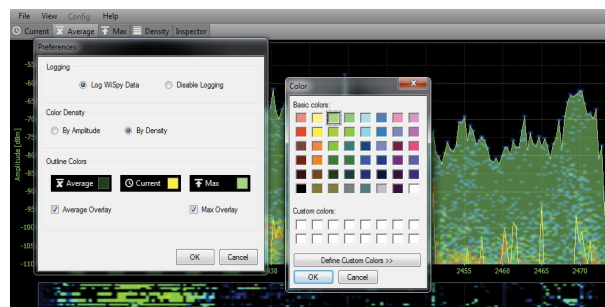
Unified Time Segment

Every graph in Chanalyzer Pro automatically adjusts itself to the user-selected timeframe to provide a Unified Time Segment for quick and easy spectrum analysis. This functionality lets users quickly drill-down to specific problems without reinitializing views.



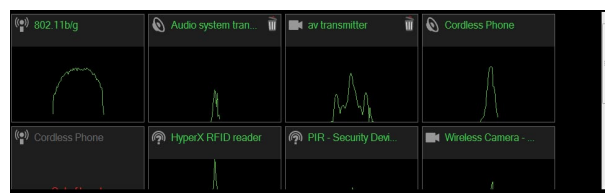
Customizable Colors

Users can choose custom colors to represent current, average and maximum, as well as overlays. This feature provides easy customization of graphs so MetaGeek users can visualize spectrum data in a format that works for them.



Device Classifiers

Transmitter silhouettes are displayed to give reference to common interferers. Signature shapes can be hovered over the density view for matching.



Custom Classifiers

An industry first, Custom Classifiers let users define custom signatures for known Wi-Fi-transmitting devices in their space. Easily capture the RF silhouette by selecting it in the Density View, then save the Custom Classifier to quickly identify the device in future scans.

Easy Configuration

Chanalyzer 4 lets users easily configure Wi-Spy DBx hardware to zoom-in on narrow swaths of the spectrum for detailed, high-resolution viewing of specific frequencies. This functionality is ideal for deciphering strange signals, tracking down devices and closely monitoring single channels.

