



# AirMagnet WiFi Analyzer

AN AIRMAGNET MOBILITY SOLUTION



AirMagnet WiFi Analyzer is the industry's "de-facto" tool for managing enterprise Wi-Fi networks. At the heart of the WiFi Analyzer is the AirWISE® engine, which automatically detects the root-cause of dozens of security and performance problems, explains alarms in plain English, and offers recommendations on how to solve or manage complex issues. The Analyzer provides instant visibility into all wireless channels, devices, conversations, speeds, interference issues and the RF spectrum, making it the ideal product for pre-deployment and post-deployment of Wi-Fi Networks. It helps address universal challenges that face new technologies or deployments and minimizes the IT Manager's struggle with the impact on new or existing networks. As always, AirMagnet delivers a solution that is user-friendly to IT professionals, network managers, security/compliance officers, and wireless LAN experts.

## WIRELESS LAN ANALYSIS AND TROUBLESHOOTING

Complete 802.11a/b/g/n Monitoring

Wi-Fi Packet & Interference Analysis

AirWISE® GUI with Expert Advice

Superior Security Threat Detection

Superior Performance Monitoring

Active Troubleshooting Toolkit

Compliance Auditing and Reporting

Multiple Platform Support

Hands-on Education and Guidance





# AirMagnet WiFi Analyzer

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The AirMagnet WiFi Analyzer software monitors all 802.11a, 11b, 11g, 11n and 4.9 GHz US Public Safety channels for complete visibility of the entire Wi-Fi domain. AirMagnet is compatible with a variety of internal and external wireless adapters. AirMagnet WiFi Analyzer can be installed on a variety of platforms including Windows-based Laptops, Tablet PCs, Ultra Mobile PCs (see specifications for recommended UMPCs) and Apple® MacBook® Pro (Atheros based chipsets only).



## AirWISE: Built-In Wireless Expertise



AirWISE Expert screen

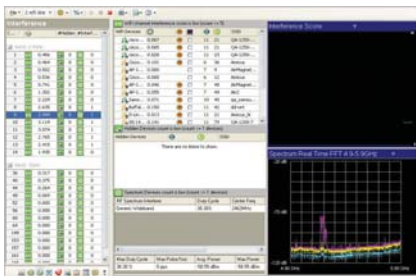
At the heart of the Analyzer is the AirWISE® engine, which automatically detects the root-cause of dozens of Wi-Fi issues across the 2.4 GHz, 4.9 GHz and 5 GHz spectrum. AirWISE® eliminates the need for users to manually interpret complex packet decodes and wireless data by taking the proactive role of identifying and explaining more than hundreds of threats and performance issues before they impact the network. The user-friendly AirWISE® interface explains alarms in straightforward details, provides access to additional diagnostic data, and offers advice on corrective actions.

### Alerts You of Rogue Devices, Intrusions and Network Weaknesses

AirMagnet's WiFi Analyzer automatically detects and alerts you of dozens of wireless intrusions, penetration attempts and hacking strategies including Rogue Devices, Denial of Service attacks, Dictionary Attacks, Faked APs, RF Jamming, "stumbler tools" and many more. AirMagnet performs a continuous vulnerability assessment of the network to detect subtle weaknesses that are often overlooked, such as devices sending unencrypted data, tracking LEAP vulnerabilities, detecting pre-802.11n devices, identifying unconfigured clients automatically scanning for APs and a host of potentially damaging security configurations. These proactive measures enable IT to take corrective action before a problem ever occurs.

### Alerts You of Network Performance Issues

Even the most secure network will fail to meet its objectives if it does not reliably meet the demands of network users. Furthermore, certain performance issues can escalate and open up the network to unknown risks. For this reason, AirMagnet has developed over 50 alerts to identify an entire range of performance issues including traffic patterns, bandwidth utilization, 802.11n issues and infrastructure or hardware failures or resets.



Wi-Fi and non Wi-Fi Interference analysis

### Complete Wi-Fi Interference detection & analysis

Wi-Fi Interference occurs due to co-channel/adjacent channel interference from the corporate or neighbor's WLAN, hidden nodes in the environment or sources outside of the 802.11 band. AirMagnet's Interference status indicator lists the overall interference status for each Wi-Fi channel, calculated based on the Wi-Fi interference score for the devices contributing to the interference; a list of hidden nodes and non Wi-Fi devices (*non Wi-Fi detection requires WiFi Analyzer PRO and AirMagnet Spectrum Analyzer*) operating in the channel. This enables AirMagnet users to plan future Wi-Fi deployments or modify their existing to increase network performance.

## Hands-on Education

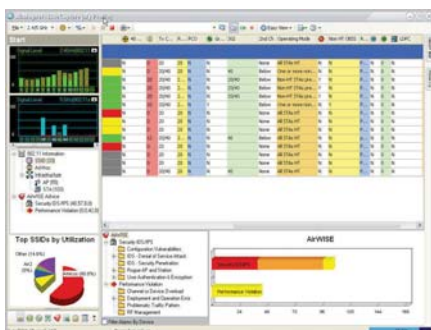


AirMagnet Learning Assistant

AirMagnet Learning Assistant provides explanations in plain, straightforward language on key technologies behind the 802.11n protocol to help the user understand technologies required to optimize their infrastructure to maximize throughput and reliability. The Assistant helps tie 802.11n network performance theory to the actual user deployment.

AirMagnet WiFi Analyzer also includes a Microsoft Office Assistant-like guided tour available on all the screens to help the user move up to speed quickly with the major functions of the application and solve real-world problems using the Analyzer.

# 802.11n Monitoring

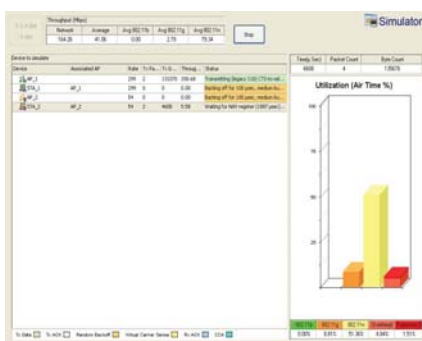


802.11n One-click view on the START screen

AirMagnet WiFi Analyzer is the World's first 802.11n WLAN Analyzer to provide the tools necessary to bring the speed and throughput potential of 802.11n into the real world. The WiFi Analyzer identifies and classifies all 802.11n capable devices in the network, supports monitoring for 20/40 MHz channels and classifies higher data rates used by the 802.11n devices. Using AirWISE®, users can solve 802.11n problems without decoding all packets and memorizing the entire 802.11n standard. The WiFi Analyzer includes the new 11n Performance Toolkit, a first-of-a-kind feature set that let users quickly see how best to deploy 11n technology and maximize the real-world performance of the network. The Analyzer shows how to get true 11n performance that rivals what 11n can do in theory and enables a smooth migration into 802.11n for the user by recognizing and resolving conflicts between new 802.11n devices and legacy a/b/g devices.

# Troubleshooting Tools

AirMagnet WiFi Analyzer provides a suite of more than 15 troubleshooting tools to pin-point and solve wireless network problems.



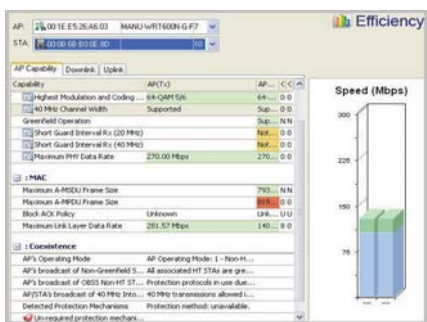
Simulate performance of the network

## WLAN Throughput Simulator Tool

The Simulator tool calculates the network throughput, utilization and the overhead under user-specified conditions by simulating the existing infrastructure or simulating the addition of new APs or stations in the network. This tool assists users to make that critical purchase decision of investing in new wireless gear and visualize their new devices would behave in the existing environment. **Note:** This tool is available in the PRO version only.

## Throughput/Iperf Tool

AirMagnet's Throughput/Iperf tool allows users to run a performance test on any AP in the environment and measure the maximum WLAN bandwidth at a particular location; find the optimum configuration for maximizing WLAN throughput and test WLAN devices under various traffic stress scenarios. AirMagnet WiFi Analyzer also integrates with Iperf – an open-source software tool for network performance analysis - to analyze uplink/downlink bandwidth, throughput (TCP and UDP), 20/40 Mhz statistics, A-MPDU, PHY Data rate, jitter and lost/total datagrams. **Note:** Iperf is available in the PRO version only.

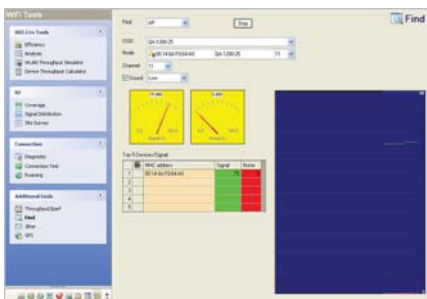


Analyze 802.11n conversations

## 802.11n Efficiency & Analysis Tools

The 802.11n Efficiency Tool powers users to take full advantage of the benefits of 802.11n technology by analyzing conversations between APs and Stations, and indicates if the network is using 802.11n to its full potential using simple color legends. The tool provides guidance on what option is not being well-used and how to better use it along with an independent visibility into the uplink and downlink performance. This tool covers all critical areas, including the Physical layer, MAC layer and co-existence issues with legacy devices.

The Analysis Tool provides detailed statistics (20/40 MHz, SGI, MCS, PHY Data Rate, A-MPDU) for any AP-Station conversation helping the user to pin-point low throughput problems. **Note:** Both tools are available in the PRO version only.



Locating devices using the FIND tool

## 802.11n Device Throughput Calculator

With all the complexity of 802.11n, it will be very hard to determine which AP will be better based on the specifications. The user can simply enter device options such as MCS index, SGI, channel widths, frame size, protection mechanisms and the Calculator tool will provide the expected network performance. **Note:** This tool is available in the PRO version only.

## FIND Tool

The Find Tool locks onto a particular AP or station and guides you to the physical location of non-complaint device or Rogue APs. The Find Tool can also be used to align signals between antennas to quickly optimize reception in line-of-sight bridging.

# AirMagnet WiFi Analyzer PRO

AirMagnet WiFi Analyzer PRO is a separate version of the Analyzer software containing all the functionality of the basic version plus an additional set of features tailored to the needs of the wireless expert. Additional features include:

## 802.11n Troubleshooting Toolkit and Alarms

AirMagnet WiFi Analyzer includes a new serial toolkit to walk users through 11n optimization and troubleshooting. AirMagnet AirWISE® also automatically detects and explain the 802.11n network mis-configurations. **Note:** *More Details in AirWISE® & Troubleshooting tools section.*

## 4.9 GHz US Public Safety Band

AirMagnet WiFi Analyzer users can monitor the band, detect security and performance issues and use a suite of troubleshooting tools to solve problems in the 4.9 GHz US Public Safety Band.

## 200+ 802.11a channel support

AirMagnet WiFi Analyzer allows the scanning of extended channels (up to 200) in the 5 Ghz spectrum. Since wireless hackers won't necessarily restrict their efforts to the commonly used channels, the ability to scan a wider range of the spectrum is becoming increasingly necessary.

## Peer to Peer

AirMagnet enables technicians to share live sessions between two Analyzers so both users can analyze and discuss the same data.,

## Integrated Reporting

AirMagnet's integrated reporter makes it easy to turn your Wi-Fi analysis sessions into professional customized reports. Choose from a library of pre-built reports or generate your own targeted reports by selecting specific items of interest from the user interface. Reports cover all areas of management including RF statistics, channel reports, device reports, security/performance issue reports and compliance reports for a variety of regulatory standards including HIPAA, PCI, SOX and more. Reports provide a step-by-step pass/fail assessment of each section of the standard.

## Spectrum Analyzer Integration

Users that own the AirMagnet Spectrum Analyzer can view both Wi-Fi and Spectrum (layer 1 FFT spectrum plot) data during a single capture session giving them the most complete view of the wireless environment possible. Users will also be able view the list of detected non Wi-Fi interfering devices such as Bluetooth devices, cordless phones, microwave ovens, RF Jammers, etc. and monitor the channels affected, power capabilities & duty cycle of each interfering source.

## Product Facts

Product	Part Number
WiFi Analyzer Standard	A1152
WiFi Analyzer PRO	A1150
WiFi Analyzer Standard to WiFi Analyzer PRO (upgrade model)	A1153
AirMagnet Spectrum Analyzer (optional)	A4030
AirMagnet Analyzer and Survey Suite for 802.11n	A1354
AirMagnet 802.11a/b/g/n Wireless PC Card	C1060

**Patents:** U.S. Patent No. 7009957, 7236460, 7292562, 7289465 and 7130289. Additional patents pending.

### Minimum System Requirements

Microsoft® Windows Vista™ Business/Ultimate (SP1) or XP™ Professional (SP3) / Tablet PC Edition 2005 (SP3) or MAC OS X Leopard™ (Apple® MacBook® Pro running Windows XP™ PRO with SP3 using Boot Camp® ). **Note:** Use Windows XP™ SP2 if using AirMagnet Spectrum Analyzer as a standalone application on the same machine.

Intel® Pentium® M 1.6 GHz (Intel® Core™ 2 Duo 2.0 GHz or higher recommended)

1 GB memory (2 GB recommended) for Windows XP™. 2 GB or higher required for Windows Vista™

An AirMagnet Spectrum Analyzer Adapter and license (Required for viewing spectrum data and classifying non-802.11 devices. Not supported on UMPC platform)

200 MB of free disk space

Cardbus, Expresscard, USB port or mini PCI slot

For Ultra Mobile PC platform support: OQO model 02/e2: <http://www.oqo.com/products/index.html> (Better and best configurations supported. Windows XP™ PRO only)

Supported wireless adapter

## For More Information

**SALES:** [http://www.airmagnet.com/company/contact\\_airmagnet.php?type=sales](http://www.airmagnet.com/company/contact_airmagnet.php?type=sales)

**DEMO DOWNLOAD:** <http://www.airmagnet.com/products/demo/?demo=wifi>

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of these URLs



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