

OptiView® Series III Network Analyzer Wireless Suite

Ensure Security, Performance and Compliance of Your Wireless LAN

Part of the OptiView Management Suite (OMS)

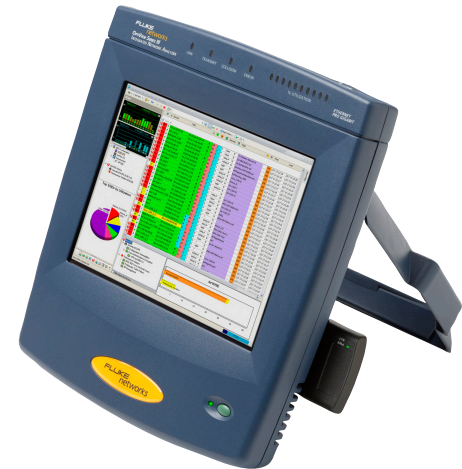
OMS provides the breadth of visibility and depth of analysis for a complete picture of network and application performance. It's the only solution that combines proactive monitoring with in-depth "on-the-wire" analysis and portability to see problems up close - anywhere on the network.

By combining best of breed solutions for monitoring, analysis and troubleshooting, OMS can be used as a holistic management suite or part of your IT organization's toolset, to help reduce complexity and improve productivity in your team's daily workflow.

OptiView Wireless Suite

At the part of OMS, the OptiView Wireless Suite gives you unmatched visibility into your wireless network. Whether you are planning a new or expanded network, migrating to new wireless technologies (like 802.11n), troubleshooting or optimizing performance, or auditing the security of your network, the OptiView Wireless Suite can help you navigate through each phase of the wireless lifecycle.

As a network professional, it's your task to support new users, new networks, new technologies and new applications, all while still delivering the network reliability and security users and business managers demand. Keeping control of a wireless network, that by design is constantly changing, requires an end-to-end management approach. And, since there are 'a lot of wires in a wireless network', you need a tool that spans both environments.



The OptiView Wireless Suite brings the power of AirMagnet's award-winning wireless tools to the portable OptiView. The suite includes the AirMagnet Survey PRO, AirMagnet Planner Module and AirMagnet WiFi Analyzer PRO and AnalyzeAir Wi-Fi Spectrum Analyzer providing value to key wireless tasks:

Deployment and Expansion Planning:

- Survey 802.11a/b/g/n Networks
- Identify Coverage Areas and Dead Spots
- Set Ideal AP Placement and Power Settings
- Identify Areas of RF Interference, Roaming & Noise
- Measure True End-User Experience
- Perform Voice & RF Spectrum Surveys
- Plan for End-User Capacity & Simulate Network
- Changes for Ongoing WLAN Optimization
- Visualize Coverage Differences Over Time
- Establish a Secure Network

RF Quality Assessment via Spectrum Analysis:

- RF spectrum analysis for troubleshooting and optimizing 802.11a/b/g WLANs
- Real-time device detection and identification
- Real-time spectrum analysis wherever you need it

Wi-Fi Analysis and Security:

- Complete 802.11a/b/g/n Monitoring
- Wi-Fi Packet & Interference Analysis
- AirWISE® GUI with Expert Advice
- Hands-on Education and Guidance
- Superior Performance Monitoring
- Active Troubleshooting Toolkit
- Superior Security Threat Detection
- Compliance Auditing and Reporting



AirMagnet Survey PRO

AirMagnet Survey PRO delivers fast, scientifically accurate site surveys for any 802.11a/b/g/n/4.9 GHz indoor and outdoor wireless network. This revolutionary software automatically gathers critical Wi-Fi and RF spectrum information from your enterprise network using multiple data collection methods, including real-world measurements, and generates detailed Wi-Fi performance maps of the results for easy network deployment, capacity planning and optimization. AirMagnet Survey PRO allows users to perform the basics of Wi-Fi site surveying with ability to map out signal, noise and even user performance. Apart from these basic features, AirMagnet Survey PRO adds powerful, industry-defining features including 802.11n deployments, multi-floor deployments, outdoor surveys, network design verification, voice readiness verification and surveys, RF spectrum analysis, and many more.

As an optional software program, AirMagnet Survey PRO can be installed and used on the portable OptiView Network Analyzer.

Real World Performance

Unlike other solutions that rely only on passively collected data such as signal strength, AirMagnet allows users to perform active/Iperf surveys to ensure a superior site survey. During an active/Iperf survey, AirMagnet actually associates to an AP to test the real quality of the connection. This allows surveyors to see exactly how real world clients will perform at specific locations in terms of connection speed, retry rates, and packet loss.

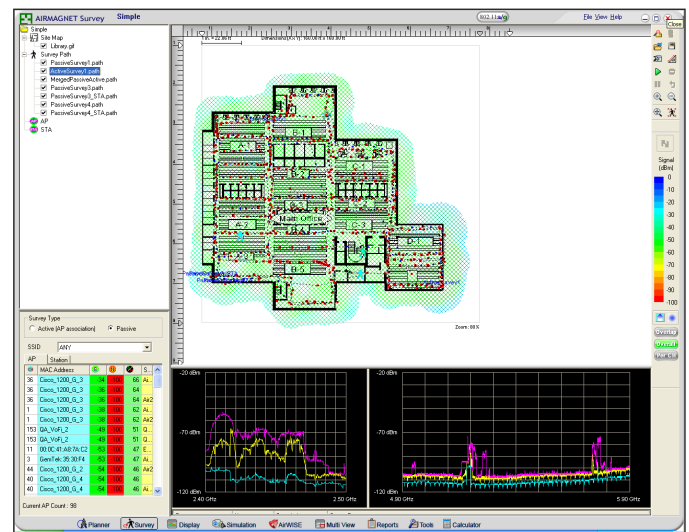
Simulation and Optimization

After a survey, users can simulate a variety of changes to the network and preview the impacts. This includes changing AP Transmit Power, Channel, SSID, and even added environmental noise. Users can simulate moving APs to new locations and preview the effect of adding additional APs. Survey can also automatically recommend a channel plan for your APs that avoids interference and over-allocation.

Additional Uses and Capabilities:

- Establish a secure network
- Visualize Coverage differences over time
- Conduct voice over Wi-Fi surveys
- Outdoor surveys
- Integration with spectrum analyzers
- Visualize multi-floor deployments
- Professional reporting

For additional information, see the detailed AirMagnet Survey PRO datasheet.



Survey View

AirMagnet Planner

AirMagnet Planner provides a single, seamless application with the industry's most complete approach to wireless LAN design, deployment and ongoing optimization for 802.11a/b/g/n networks. With this integrated solution, users can use Planner to accurately design their WLANs and plan for speed; then validate the results with real-world data in Survey PRO using active end-user performance metrics, such as actual connection speed and performance metrics, allowing users to further perfect their planning models over time. No other solution combines state-of-the-art predictive modeling with real-world performance data. Users also gain additional planning capabilities with the ability to test network plans against the AirWISE engine for design requirements; and the Throughput coverage map to visualize predicted WLAN performance at every location on the floor map.

Note: Planner does not run on the OptiView platform, it must be installed on a stand-alone PC.

For additional information, see the detailed AirMagnet Planner datasheet.

AnalyzeAir Wi-Fi Spectrum Analyzer

AnalyzeAir Wi-Fi Spectrum Analyzer software runs on the OptiView platform and provides IT network professionals the vision they need into the hidden world of RF, providing them the ability to see the spectrum in a visible and intelligible format. AnalyzeAir lets you see, monitor, analyze, and manage all the RF sources and wireless devices that influence your Wi-Fi network's performance and security, even if those devices are unauthorized or transient. Unlike single-function RF analyzers or expensive tools that provide RF information without device identification and location, AnalyzeAir provides an easy-to-understand, fast-start solution allowing users to quickly resolve RF problems that prevent WLAN connectivity and impact performance.

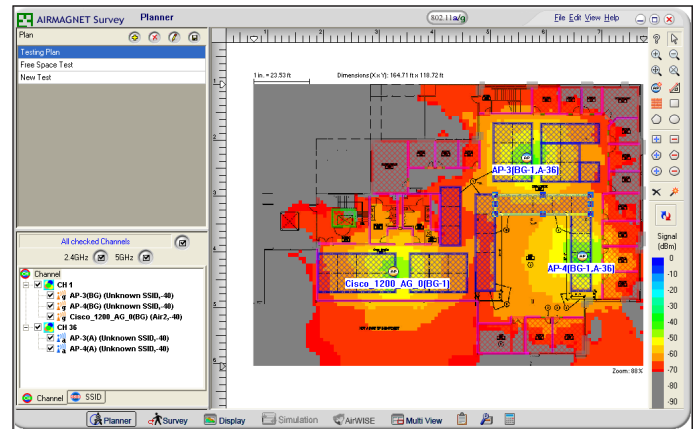
For additional information, see the detailed AnalyzeAir Wi-Fi Spectrum Analyzer datasheet.

AirMagnet WiFi Analyzer

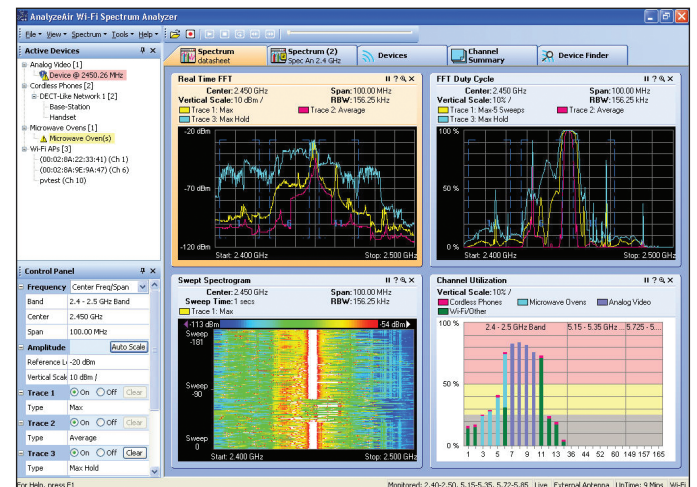
AirMagnet WiFi Analyzer provides full visibility into the performance and security of the wireless environment while vastly simplifying troubleshooting in the field with automated analysis of all Wi-Fi traffic and conversations, wireless channels/devices and the RF spectrum along with expert advice and guided problem resolution in plain English. AirMagnet WiFi Analyzer has many of the feature-rich qualities of a dedicated, policy-driven wireless LAN monitoring system.

AirMagnet WiFi Analyzer automatically detects the root-cause of dozens of security and performance problems, explains alarms in plain language, 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. The Analyzer has the capability of Wi-Fi troubleshooting and auditing with the ability to see devices, automatically identify common problems and physically locate specific devices. The Analyzer also provides a Wi-Fi toolset to solve virtually any type of performance, security or reporting challenge in the field.

As an optional software program with included 802.11a/b/g/n card, AirMagnet WiFi Analyzer for OptiView can be installed and run on the portable OptiView Network Analyzer.



Automated WLAN modeling



AnalyzeAir Overview

Wi-Fi Device Inventory

AirMagnet WiFi Analyzer provides an inventory of all 802.11a, 11b, 11g, 11n and 4.9 GHz devices (4.9 GHz monitoring supported on PRO version only) operating in the wireless environment. It provides detailed information on the configuration settings that are available or are in use on the devices, including critical parameters such as signal strength, noise, SSID, security setting in use, associated devices, 802.11n properties, and many more.

Built-In Wireless Expertise

At the heart of the Analyzer is the AirWISE® engine, which automatically detects the root-cause of dozens of Wi-Fi issues across the 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.

AirMagnet WiFi Analyzer also includes “How To” guides to walk network administrators through the identification of an issue, including security, performance, interference, device configuration issues, and guide them to solving those problems. The library also includes information on the major functions of the analyzer and their usage in identification and resolution of Wi-Fi problems.

Rogue Device/Intrusion Detection and Network Weaknesses Alerts

AirMagnet’s Wi-Fi Analyzer automatically detects and alerts the user to dozens of wireless intrusions, penetration attempts and hacking strategies including rogue devices, “stumbler tools”, devices sending unencrypted data and a host of potentially damaging security configurations. These proactive measures enable IT to take corrective action before a problem ever occurs. The PRO version additionally detects sophisticated wireless attacks against the network. Refer to the Wi-Fi Analyzer PRO version features section for more details.

AirMagnet Analyzer’s Find Tool locks onto an unauthorized/rogue or policy violating AP or station and guides the user to its physical location.

Type	MAC	Security	Associated AP	#STA	First
SSID: 188					
AP	Symbol:E7:EE:00	00:A0:F6:E7:EE:00	g	0	Open N 100 1 12/17
SSID: 188ALT					
AP	Symbol:E7:EE:0C	00:A0:F6:E7:EE:0C	g	0	WPA-E N 100 0 12/17
SSID: AM_Test					
AP	Cisco-Linksys:26:A6:03	00:1E:E9:26:A6:03	g	0	Open N 100 0 12/17
STA	Sonya:22:7E:13E	00:03:6F:22:7E:13E	g	0	? N 100 0 12/17
STA	Intel:6C:71:FF	00:16:6F:6C:71:FF	g	0	? N 100 0 12/17
SSID: Air2					
AP	AP-14(BG)	00:11:5C:4D:E8:40	g	28	WPA2-E N 100 2 12/17
AP	AP-11(BG)	00:15:F9:57:A0:20	a	0	WPA2-E N 100 0 12/17
AP	AP-12(BG)	00:15:F9:57:95:40	a	18	WPA2-E N 100 0 12/17
AP	AP-11(BG)	00:11:5C:44:5E:80	g	0	WPA2-E N 100 0 12/17
AP	AP-14(BG)	00:15:F9:57:9E:90	a	0	WPA2-E N 100 2 12/17
AP	AP-13(BG)	00:15:F9:57:93:90	a	28	WPA2-E N 100 0 12/17

Wi-Fi Device Inventory

AP broadcasting SSID

AP Cisco:4D:E8:41 (Name: Cisco_1200_G_4; SSID: AirMagnetGuest) is currently broadcasting its SSID (AirMagnetGuest) in clear text. For security reasons, it is generally recommended that the SSID broadcast be turned off in the AP configuration. For certain vendor APs, this configuration is called "Broadcast SSID in beacon". Even though turning off SSID broadcast does not secure your WLAN by any definition, it does prevent your AP from being discovered by ward-driving tools such as NetStumbler. Turning off SSID broadcast also blocks out casual WLAN hackers who do not have sophisticated tools and knowledge. Please note that the system can discover un-broadcasted SSID and APs.

Channel	Source Device	Destination Device	Rx Total	Tx Total
4	Cisco_1200_G_4	(N/A)	0	0
4	Media Type		125	1573

AP Detail

- First seen time: 10:39...
- Last updated time: 10:44...
- Latitude: (N/A)
- Longitude: (N/A)
- Announced SSID: Yes

Graphs: Signal / Noise, Rx & Tx CRC Error Frame %/sec, Utilization, Rx & Tx Retry/sec, Rx & Tx CRC Error/sec, Rx & Tx Retry Frame %.

AirWISE Expert Screen

Network Performance Alerts

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, device configuration issues and infrastructure or hardware failures or resets.

Real-time Wi-Fi troubleshooting

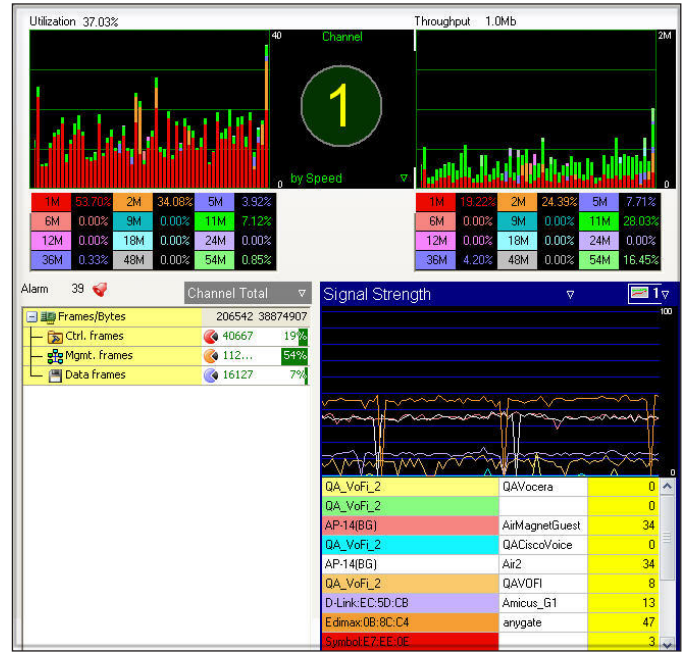
AirMagnet WiFi Analyzer provides in-depth frame statistics for every channel and device operating in the 2.4 GHz and 5 GHz spectrum. With the channel utilization and throughput trending graphs, users can solve many of the issues that lower the overall performance of the Wi-Fi network. Users can view trending graphs for Signal strength, Noise, frames, errors, retries and bandwidth for every Wi-Fi channel and device. These valuable graphs provide critical pointers to issues that are influencing the Wi-Fi network performance. For example, graphs for packet retry and error rates reveal areas where Wi-Fi communications are failing.

Decode Wi-Fi frames

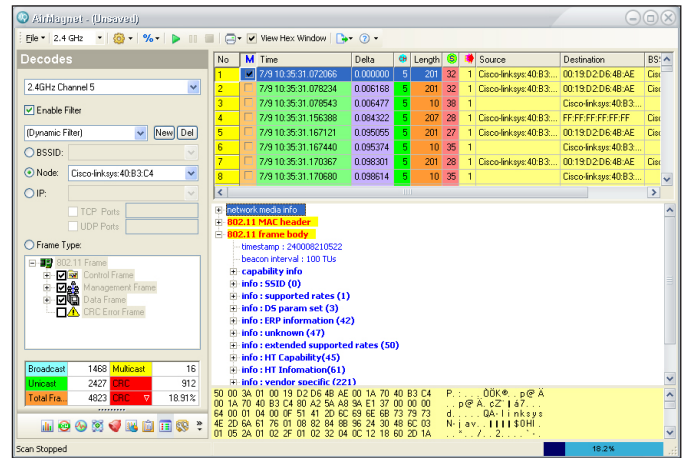
Wi-Fi Analyzer users can view real-time packet flows for any Wi-Fi asset. Users can track 802.11 frames, watch CRC errors, utilization, packet speed, media type and more. The Analyzer decodes the most popular protocols such as FTP, HTTP, SMTP, POP, and Telnet, with advanced filtering options that allow the user to focus on particular conversations based on IP address or port number.

Analyze Top talkers in the network

AirMagnet WiFi Analyzer lists the top talkers in the network based on speed, number of frames, Retry/Frag, Address and Media type. This information is helpful for pin-pointing Wi-Fi devices that are potentially choking the Wi-Fi network bandwidth.



Trending graphs for detailed analysis



View raw Wi-Fi frames

Additional uses and capabilities

Active troubleshooting tools

AirMagnet WiFi Analyzer PRO includes a suite of active troubleshooting tools available at the user's fingertips to help them quickly pinpoint wireless network problems. This includes troubleshooting users not being able to connect to the network, users experiencing slower connections, 802.11n mis-configurations, traffic/infrastructure overloads, hardware failures, roaming problems, multipath interference problems and more.

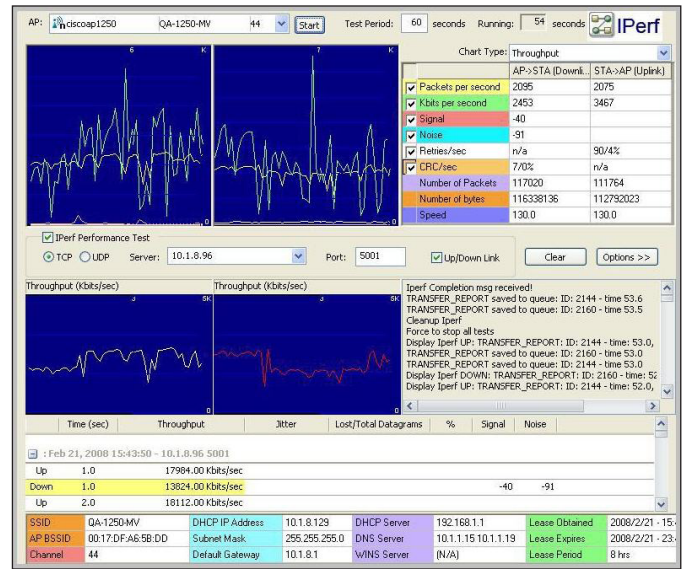
Sophisticated wireless attack detection

In addition to the unauthorized device and stumbling tools detection, the AirMagnet WiFi Analyzer PRO's AirWISE® engine detects sophisticated attacks launched against the corporate wireless network, that are aimed at disrupting the wireless services. These include Denial of Service attacks against the corporate AP/STA/Infrastructure, such as RF Jamming attacks, association and encryption-based DoS attacks, wireless disconnection attacks, and many more. Analyzer PRO also detects penetration attempts against the wireless infrastructure, including a variety of dictionary attacks, fake access points, WEP cracking tools, man the middle attacks, illegal wireless frame attack, hotspot attacks, honeypot attacks, etc.

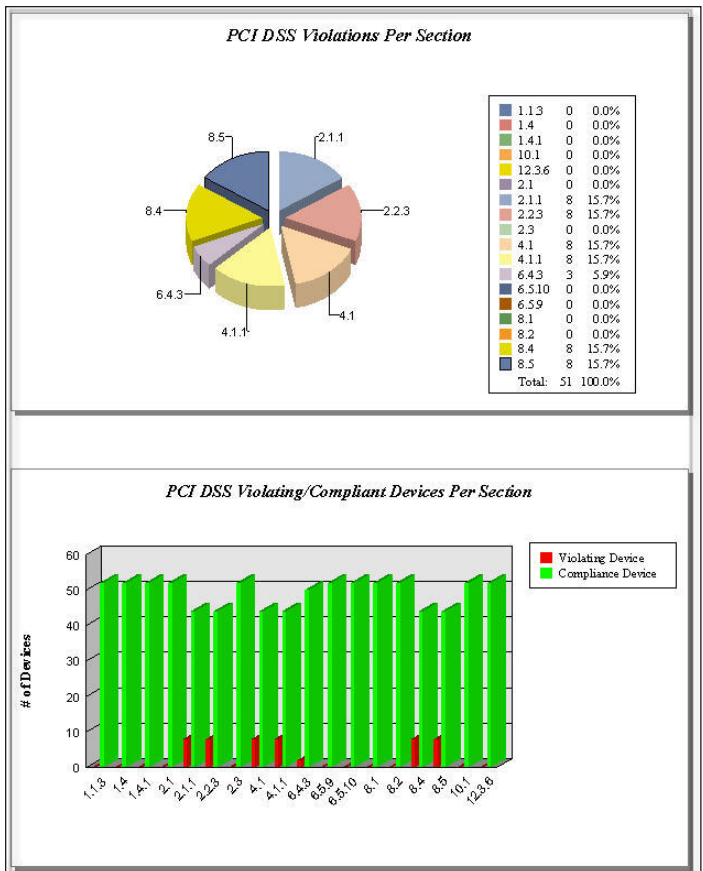
Analyzer allows the scanning of 200+ extended channels in the 5 GHz spectrum. Since wireless hackers won't necessarily restrict their efforts to the commonly used channels, the ability to scan a wider range of the spectrum is becoming increasingly necessary.

Integrated Reporting

AirMagnet's integrated reporter makes it easy to turn the Wi-Fi analysis sessions into professional customized reports. Choose from a library of pre-built reports or generate 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.



Throughput measurement tool

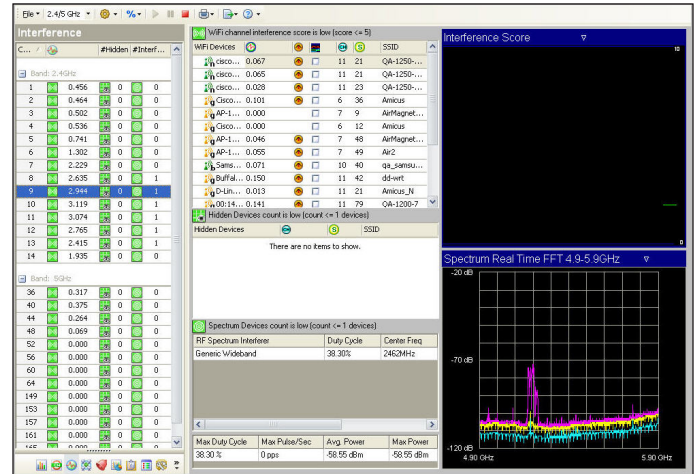


AirMagnet Compliance reports



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 Wi-Fi Analyzer PRO and AnalyzeAir Wi-Fi Spectrum Analyzer installed on the same machine) operating in the channel. This enables users to plan future Wi-Fi deployments or modify their existing to increase network performance.



Wi-Fi & non Wi-Fi Interference analysis

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.

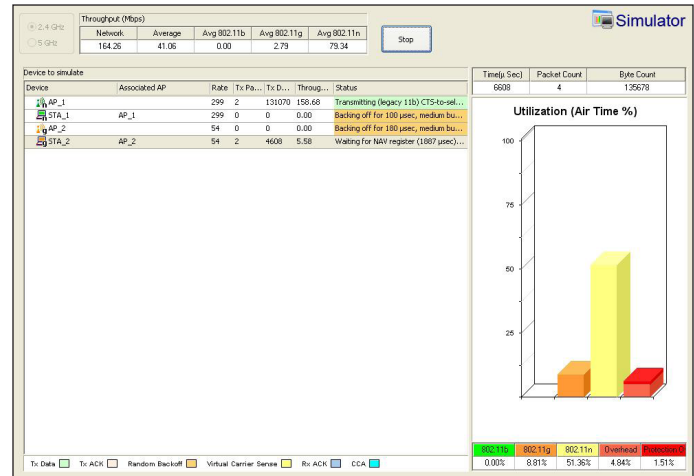
The WLAN Throughput Simulator tool: It calculates the network throughput, utilization and the overhead under user-specified conditions by simulating the existing network or simulating the addition of new APs or stations in the network.

Throughput/Iperf tool: It 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 devices under various traffic stress scenarios.

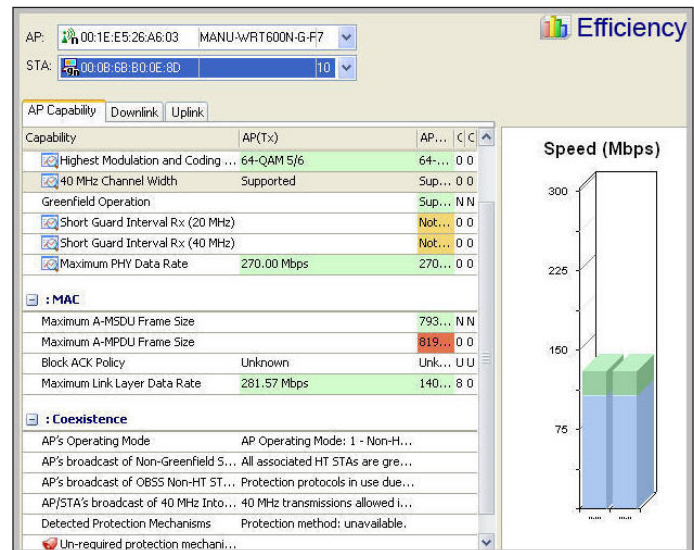
802.11n Efficiency Tool: It analyzes conversations between 802.11n APs and Stations, and indicates if the network is using 802.11n to its full potential using simple color legends. The tool provides guidance on what option is not being well-used and how to better use it along with an independent visibility into the uplink and downlink performance.

802.11n Analysis Tool: It 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.

Device Calculator Tool: Users can simply enter the 802.11n AP specifications within this tool to calculate the expected network performance.



Simulate performance of the network



Analyze 802.11n conversations



Fluke Networks Wireless LAN Adapter Card specifications

	OPV-WNA3	OPV-WNA4
Specification compliance	IEEE 802.11a, .11b, .11g	IEEE 802.11a, .11b, .11g, .11n
Host interface	Cardbus form factor with 32-bit interface	Cardbus form factor with 32-bit interface
Interoperability	WECA compliant	WECA compliant
Certifications	FCC part 15 (USA), Pre IC RSS210 certified, Telec (Japan), ETSI, EN301893, EN60950 (Europe)	FCC part 15 (USA), Pre IC RSS210 certified, Telec (Japan), ETSI, EN301893, EN60950 (Europe), VCCI Class B
Output power	18 dBm peak power	802.11a/b/g 17 dBm peak power 802.11n 2.4GHz HT20 18dBm peak power, 2.4GHz HT40 18dBm peak power, 5GHz HT20 18dBm peak power 5GHz HT40 17dBm peak power
Security	40/64-bit, 128-bit WEP Encryption (open/shared) 802.1x, WPA, WPA PSK, WPA2/802.11i, WPA2/802.11i PSK Authentication AES-CCM & TKIP Encryption	64-bit, 128-bit, 152-bit WEP Encryption 802.1x, WPA, WPA PSK, WPA2/802.11i, WPA2/802.11i PSK Authentication AES-CCM & TKIP Encryption
EAP types	EAP TLS, LEAP, EAP FAST, PEAP GTC, PEAP MD5, PEAP MSCHAP-V2, PEAP TLS, TTLS PAP, TTLS CHAP, TTLS MSCHAP, TTLS MSCHAP-V2, TTLS EAP-MD5, TTLS EAP-GTC, TTLS EAP-MSCHAP-V2, TTLS EAP-TLS	EAP TLS, LEAP, EAP FAST, PEAP GTC, PEAP MD5, PEAP MSCHAP-V2, PEAP TLS, TTLS PAP, TTLS CHAP, TTLS MSCHAP, TTLS MSCHAP-V2, TTLS EAP-MD5, TTLS EAP-GTC, TTLS EAP-MSCHAP-V2, TTLS EAP-TLS
Operating temperature	0° C to 70° C (32° F to 158° F)	0° C to 55° C (32° F to 131° F)
Storage temperature	-20° C to 70° C (-40° F to 158° F)	-20° C to 80° C (-40° F to 176° F)
Internal antenna	Embedded dual band antenna	Dual band metal PIFA antenna x2 and chip antenna x1
External antenna	VSWR 2.0, Gain 2.4 GHz - 2.485 GHz: 2 dBi. 4.9 GHz - 5.875 GHz: 3.5 dBi Cable Length 120cm	Not available

Models, options and accessories

Models	Description
OPVS3-WFA	AirMagnet WiFi Analyzer PRO for OptiView, includes 802.11a/b/g/n WLAN analysis card and POE detector
OPVS3-WL	OptiView Wireless Software Suite includes: AirMagnet Survey PRO and Planner Module, AirMagnet WiFi Analyzer PRO for OptiView and AnalyzeAir Wi-Fi Spectrum Analyzer
OPVS3-WSPI	OptiView Wireless Software Suite includes: AirMagnet Survey PRO and Planner Module, and AnalyzeAir Wi-Fi Spectrum Analyzer
OPVS3-WSP	OptiView Wireless Survey and Planning Suite includes: AirMagnet Survey Pro & Planner Module
ANALYZEAIR	AnalyzeAir Wi-Fi Spectrum Analyzer
	Support
GLD-AM-WFA	Gold Product Support Services, 1 Year AirMagnet WiFi Analyzer Pro for OptiView
GLD-AM-WSP	Gold Product Support Services, 1 Year OptiView Survey and Planning Suite
GLD-ANALYZEAIR	Gold Product Support Services, 1 Year AnalyzeAir WiFi Spectrum Analyzer

NOTE: For OPVS3-WL and OPVS3-WSPI, Gold Product Support must be purchased for each component separately. For example, to order complete Gold Product Support for OPVS3-WSPI, order GLD-AM-WFA and GLD-AM-WSP



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