

# Innovative Solutions

for the Security, Performance  
and Compliance of

## Wireless Networks

# Challenges of Managing Wireless Networks for Security, Performance and Compliance

The wireless network has earned a status of “essential” in many enterprises, but it also exposes organizations to a new breed of threats and operational problems that are different from wired networks. In a traditional wired network, all traffic is closely monitored at one entry and exit point. This perimeter protection model is sidestepped by Wi-Fi because untrusted wireless traffic can directly bypass these controls on the physical network.

The consequences of this model are two-fold. First, rogue access via Wi-Fi can provide an easy entrée to the organization’s entire network. Secondly, wireless end-users, APs and their traffic can be directly exposed to a variety of external dangers including Denial of Service attacks, phishing, identity spoofing and hundreds of readily available hacking tools that can cause disruptions of service.

But security is not the only challenge of Wi-Fi. Network performance and reliability is another huge issue because wireless LANs pose unique challenges requiring specialized network management tools and applications that are different from those used for wired networks. Without these resources, organizations must rely on haphazard testing and diagnostics by “wireless gurus” – a throwback to the early days of networking.

The other major challenge of wireless is finding the capability to audit all wireless access traffic for each user. Without this data, organizations cannot verify compliance with enterprise policies, or with industry regulations for safeguarding the privacy of personally identifiable information.

## Expert Intelligence for Wireless Deployments

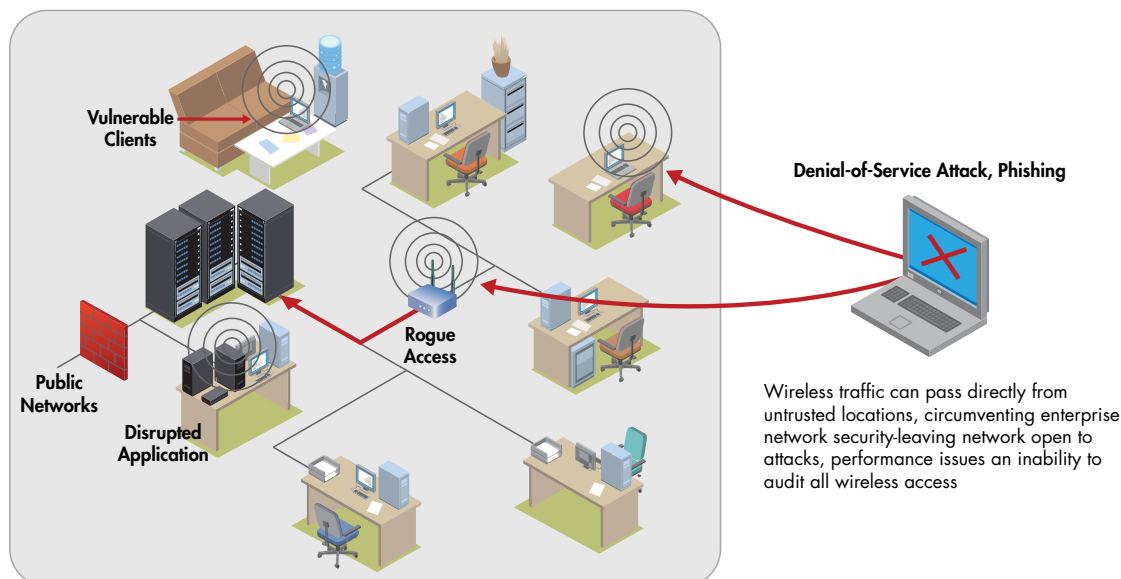
AirMagnet solutions provide a common intelligence that is a prerequisite for real control over Wi-Fi security and performance. Unlike the periodic “self-monitoring” found in most modern APs, AirMagnet solutions are based on the active, first-hand observation of the entire wireless environment.

This means that AirMagnet analyzers continuously inspect every wireless conversation, every device, all possible Wi-Fi channels and the entire Wi-Fi spectrum for problems. This unbridged insight

into Wi-Fi provides the details needed to understand a problem and the ability to proactively identify hundreds of security and performance problems that simply can’t be seen from a periodic snapshot.

For example, in the 60 seconds between an AP snapshot, AirMagnet could see a hacker compromise an end-user’s computer, spoof that user’s identity, track all packets and traffic from the attacker and begin remediation for the threat. A passive (indirect) solution would not likely see the threat and certainly could never give the details needed to help staff know what actually happened.

In order to keep a network secure, or to quickly understand and fix a problem, you must collect and base decisions on a complete set of data from the real-world environment. This is precisely what AirMagnet provides across all of its solutions – direct, deep and active analysis of everything in the wireless LAN.



# AirMagnet Wireless Network Assurance

AirMagnet provides the only comprehensive solution for managing all risks associated with wireless networks so business applications are secure, reliable and compliant.

## Security

- 24x7 intrusion detection and prevention
- Track all devices, channels and traffic
- Pinpoint exact location of rogue devices and threats

## Performance

- Proactively identify wireless problems
- Understand how wireless relates to key requirements
- Analyze data in simple terms for rapid adjustments to WLAN performance

## Compliance

- Automatically report for compliance with PCI DSS, HIPAA, GLBA, Sarbanes-Oxley and more
- Verify WLAN compliance with internal policies
- Pass/fail report card by device

*"AirMagnet has always understood that wireless security must extend beyond access points."*

Ronald Shaul,  
Director,  
Smart City Networks

## Proactive Security Stops Threats

AirMagnet solutions detect and stop all types of wireless security threats by tracking all devices, channels and traffic. Mobile diagnostic tools enable tracking the source of any threat, hacker or vulnerability.

AirMagnet 24x7 intrusion detection instantly spots rogue devices and hundreds of additional threats, and pinpoints their exact physical location on the network.

Alerts notify network staff to wireless vulnerabilities in access points and devices using the network. Wireless attacks are automatically blocked, and AirMagnet prevents threats from penetrating the enterprise network with wire-side blocking. Centralized correlation and analysis statistically finds security anomalies that would be missed by less advanced systems. Independent sensors deployed throughout the enterprise ensure comprehensive and accurate monitoring. The architecture is designed for fault-tolerant operation of security controls.

## Expert Systems Pinpoint Problem Roots to Fine-Tune Performance

The performance and reliability of a WLAN is just as important as security. If a network doesn't run well, then users are far more likely to install their own rogue access points to try and compensate. Unfortunately, troubleshooting wireless performance problems can be notoriously time consuming. The sources of problems could be related to RF, interference, client-side

glitches, an improper setting in the WLAN infrastructure, or any of dozens of other wireless issues. AirMagnet automatically and proactively identifies the root-cause of the wireless problems so that issues can be fixed quickly. Results of raw wireless data analysis are presented in simple terms to enable precise, rapid adjustments to WLAN performance.

## Automatic Audit and Verification of Compliance

Organizations often find that complying with policy and legal regulations can require countless hours of collecting data, verifying compliance, and documenting the results in reports that conform to requirements of the law. Typical regulations requiring action by the IT staff include PCI DSS, HIPAA, GLBA, Sarbanes-Oxley, DoD 8100.2, Basel II and others. AirMagnet automatically tests for compliance with these and many other regulations. Every standard compliance report includes an overview of the regulation and how it applies to WLANs; details of compliant and non-compliant devices; details of violations by relevant sections of the regulation, what led to each violation and a detailed pass/fail report card by device. Users can also create reports based on their own internal policies for internal reporting and compliance.

# AirMagnet Solution Suite

AirMagnet provides software tools and systems designed to match requirements for each point of the WLAN lifecycle, including network design and planning, deployment, optimization, intrusion detection, vulnerability assessment, operations, troubleshooting, audit, reporting and compliance.

## Enterprise-Wide Solutions

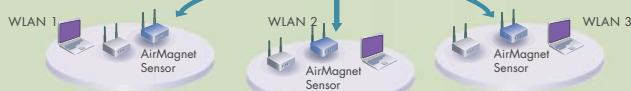
Enables Wi-Fi or RF analysis for any WLAN site from a central console

### AirMagnet Enterprise Software

- Central control of global WLAN
- 24x7 proactive monitoring of all devices, channels and traffic

### Server

- Correlates all events from sensors
- Complete database stores historical data
- Integrates with 3rd party systems



### AirMagnet SmartEdge Sensors

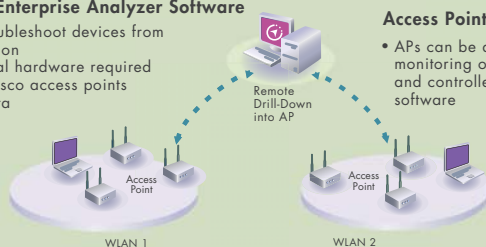
- Collects and analyzes every Wi-Fi packet, channel, band, client and access point

### AirMagnet Enterprise Analyzer Software

- Remotely troubleshoot devices from central location
- No additional hardware required
- Leverages Cisco access points to collect data

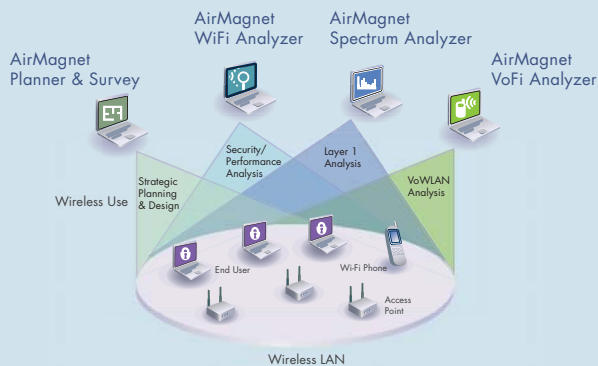
### Access Points (APs)

- APs can be dedicated to full-time monitoring over multiple channels and controlled by AirMagnet software



## Mobility Solutions

Enables Wi-Fi or RF data analysis within immediate coverage area



## AirWISE Analysis Engine

Unique technology underpinning every AirMagnet solution

AirWISE® is the intelligent Wi-Fi analysis engine that translates raw wireless data collected by AirMagnet solutions into actionable intelligence written in simple terms. AirWISE detects and processes wireless events that can impact security, performance or compliance. The engine translates analytics and complex concepts into easy-to-understand terms, explains Wi-Fi events in detail, and prioritizes the most threatening or important issues.

AirWISE presents deep background on each wireless issue – making it easy for networking technicians to deploy and maintain WLANs with the same confidence as wired networks. AirWISE prescribes the best solution for each issue, so you get concrete guidance on solving wireless problems.

Easy-to-understand analysis of issues relating to:

- Security
- Rogues
- Encryption
- Access Points
- Channels
- Signal
- Traffic
- Coverage
- RF interference
- VoWLAN
- Compliance

# AirMagnet Enterprise Solutions

AirMagnet Enterprise solutions help CIOs, IT, network and security managers by giving them precise insight and control over wireless LANs and ensuring compliance. AirMagnet Enterprise solutions enable businesses to centrally manage and troubleshoot global WLAN deployments, streamline security policies across the entire enterprise, and actively diagnose and fix problems remotely.

## AirMagnet Enterprise

Global, 24/7 Security and Performance Monitoring and Remote Troubleshooting



AirMagnet Enterprise is the only centralized solution in the world to use intelligent sensors to locally collect and analyze every wireless packet, device, and conversation for security and performance problems. A centralized server correlates events from all AirMagnet Sensors world-wide and integrates with other systems, while console software provides the user-interface and enables remote troubleshooting of global WLAN locations. The architecture is designed for fault-tolerant performance with automatic local redundancy and recovery for sensors and servers. It supports wireless equipment from all vendors and infrastructures, allowing AirMagnet Enterprise users to get a single, consolidated view of security and performance for all Wi-Fi in the distributed enterprise. The solution is ideal for enterprises whose businesses depend on wireless networking, require strict security and compliance, or need to troubleshoot multiple WLAN locations.

Capabilities include:

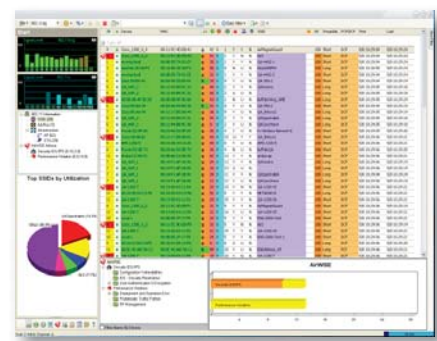
- Continuously monitor entire wireless airspace
- Proactively suppress all wireless threats with a combination of wired and wireless suppression techniques, including tracing and locating the origin of each wireless threat
- Continuously monitor for dozens of real-world performance issues including overloaded resources, bandwidth problems, RF issues and interference via Spectrum Sensors
- Set policies for all WLAN locations to streamline security standards, log approved devices, trigger automatic responses to events, and audit for 100% compliance
- Set conditional thresholds for alarms and assign specific users to be notified based on security policies, individual preferences, or send alarms to a third-party SIM
- Use active network diagnostic and testing tools to troubleshoot connectivity problems in any remote WLAN location, including any WLAN link and DHCP server
- Leverage full security and analysis for 802.11n to ensure optimal performance

*"We deployed AirMagnet Enterprise because the product allows us to remotely manage our networks and detect in real-time any rogue device on the network that may violate the PCI standard."*

Cameron Pumphrey, Fuddruckers

## AirMagnet Enterprise Analyzer

Real-Time Remote Troubleshooting for Cisco® Networks®

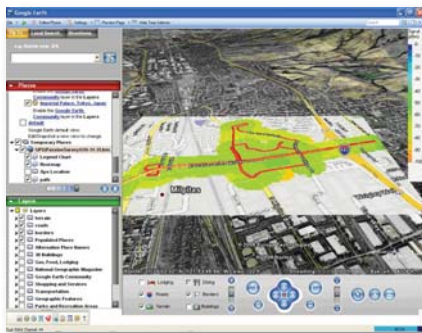


AirMagnet Enterprise Analyzer for Cisco is a software-only Wi-Fi troubleshooting solution designed specifically for Cisco Unified Wireless Networks. AirMagnet Enterprise Analyzer software cooperates with Cisco wireless LAN controllers and lightweight access points to collect Wi-Fi data for expert analysis. The AirMagnet AirWISE® analysis engine automatically pinpoints more than 130 classes of wireless problems that can hinder network performance, explains each in simple terms, and offers advice on corrective actions. Network managers can also remotely troubleshoot wireless problems in real-time without having to travel on-site. The result is a much faster resolution to wireless problems, and the most efficient use of WLAN hardware resources. Optional integrated reporting and compliance auditing enables network managers to turn their analysis sessions into customized reports, or to perform a complete audit of their wireless environment.

## AirMagnet Mobility Solutions

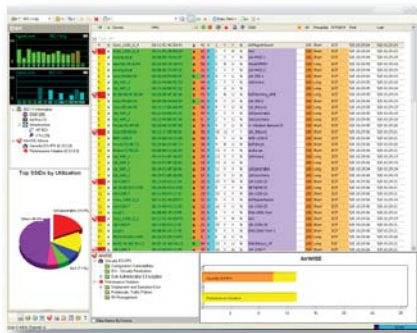
AirMagnet delivers software-based solutions that provide expert analysis of the wireless LAN for quick and effective design and troubleshooting. Its intelligent insight into RF and network level information enables network managers to pinpoint the source of issues that pose risks or disrupt performance. AirMagnet ensures WLAN applications, such as voice-over-wireless LAN maintain integrity throughout deployment and expansion phases.

### AirMagnet Planner and Survey



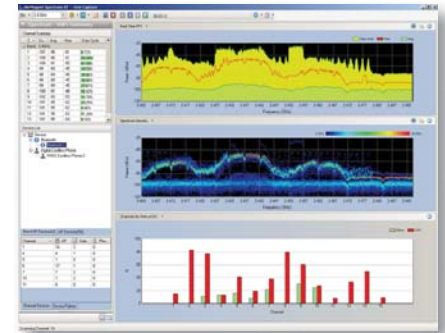
AirMagnet Planner takes the guess-work out of WLAN design and installation, making it easy for network professionals to accurately plan and deploy 802.11a/b/g/n-based wireless networks in any indoor environment. AirMagnet Planner integrates with AirMagnet Survey, the most accurate WLAN design and deployment solution. AirMagnet Survey collects “live and real-world” signal, performance and spectrum data, enabling network managers to determine ideal quantity, placement and configuration of APs for optimal security, performance and compliance. The solution integrates with AirMagnet Spectrum XT at critical stages of WLAN planning and deployment when Layer 1 analysis is needed most. AirMagnet Survey also integrates with AirMagnet VoFi Analyzer to allow network managers to perform voice-grade site surveys.

### AirMagnet WiFi Analyzer



AirMagnet WiFi Analyzer is the industry standard tool for mobile auditing, security, and troubleshooting enterprise Wi-Fi networks. AirMagnet WiFi Analyzer helps IT staff quickly solve end user issues while automatically detecting security threats and other wireless network vulnerabilities. The solution includes a suite of active WLAN diagnostic tools, enabling network managers to easily test and diagnose dozens of common wireless performance issues including connectivity problems, device conflicts and signal multi-path problems. AirMagnet WiFi Analyzer includes a full compliance reporting engine, which automatically maps collected network information to requirements for compliance with policy and regulations. AirMagnet WiFi Analyzer integrates with AirMagnet Spectrum XT for simultaneous Layer 1 and Layer 2 troubleshooting.

### AirMagnet Spectrum XT



AirMagnet Spectrum XT is the first professional spectrum analyzer solution that combines in-depth RF analysis with real-time WLAN information for quicker and more accurate troubleshooting of performance problems. By viewing the impact of RF interference on the network’s overall performance, network managers can more easily pin-point the root-cause of problems. Available in a USB form factor, AirMagnet Spectrum XT locates non-WLAN devices such as Bluetooth, microwave ovens, cordless phones, digital video monitors, zigbee devices, game controllers, RF jammers, wireless cameras and more.

### AirMagnet VoFi Analyzer

AirMagnet VoFi Analyzer is the only solution for troubleshooting voice-over-WLAN problems. The solution provides full analysis of encrypted WLAN traffic, scoring all calls in terms of call quality and proactively identifying all types of problems including phone issues, roaming issues, QoS issues, and RF. AirMagnet VoFi Analyzer collects and correlates diagnostic information from the phone, air and wired-side of the connection to provide complete analysis.

### Overcome Challenges with Deploying 802.11n Networks

AirMagnet provides the first comprehensive set of mobile tools specifically designed for pre-deployment planning and ongoing management of 802.11n networks. AirMagnet WiFi Analyzer, AirMagnet Planner, and AirMagnet Survey are essential for educating users on the impact of 802.11n, simulating deployment scenarios, and optimizing ongoing security and performance management.

## Leadership and Innovation for Wireless

AirMagnet, now part of Fluke Networks, is the clear leader for innovation in wireless security, performance and compliance. More than 8,500 enterprise customers have some of the world's largest and most complex WLAN environments, including 75 of the Fortune 100.

*AirMagnet stands "firmly on the four pillars of success, namely Products, People,*

Wireless Products Guide

*"AirMagnet is a must have tool for successfully planning wireless networks."*

Chris Davies,  
Senior Systems Analyst for  
Pembrokeshire County Council.

*"Using AirMagnet's VoFi Analyzer PRO, IT managers have unprecedented visibility of all phases of voice traffic in Voice-Over-Wireless LAN systems."*

RF Design

*"Using AirMagnet Survey PRO, I have reduced time taken to deploy wireless networks by 80%"*

HUBER & SUHNER

*"AirMagnet's WiFi Analyzer PRO helps materialize the invisible"*

Network Computing

Proven deployments from corporate skyscrapers to military battlefields include customers across all major business sectors – manufacturing, financial, retail, service, health care, utility, energy and transportation, education, telecommunications, media, government and technology.

AirMagnet customers receive outstanding customer service from our world-class support team and global channel partners.

AirMagnet has been first in the wireless industry to: deliver threat blocking for wireless and wire-side; automate intrusion prevention; deliver a complete threat detection library; include spectrum analysis for Layer 1 attacks and interferers; provide the only fault tolerant enterprise solution; and provide the only VoWLAN analyzer for encrypted WLANs.

AirMagnet partners with best-of-breed technology and market leaders through the AirMagnet Technology Alliance Program. Partners include:



AirMagnet also has an unmatched record in independent third-party evaluations. AirMagnet has won dozens of industry awards and more head-to-head competitive reviews than all other competitors combined.



## Learn More

AirMagnet solutions give enterprises full confidence in their wireless deployments – and the assurance they are operating secure, well-performing and compliant networks. We invite you to learn more about Wireless Network Assurance, and how AirMagnet can help your enterprise take full control of WLAN security, performance and compliance. For more information, please contact AirMagnet at +1 408-400-0200 or visit us on the web at [www.airmagnet.com](http://www.airmagnet.com).

## About AirMagnet

AirMagnet, now part of Fluke Networks, is the leader in security, performance and compliance solutions for wireless LANs. The company's innovative products include AirMagnet Enterprise, the leading 24x7 WLAN security and performance management solution, and AirMagnet WiFi Analyzer – which is known as the "de facto tool for wireless LAN troubleshooting and analysis." Other products provide WLAN site survey and design, RF interference detection, remote diagnostics, and the world's first voice over Wi-Fi analysis solution. AirMagnet has more than 8,500 customers worldwide, including 75 of the Fortune 100.



### Americas, Asia Pacific

830 E. Arques Avenue  
Sunnyvale, CA 94085  
United States  
Tel: +1 408.400.0200  
Fax: +1 408.744.1250  
[www.AirMagnet.com](http://www.AirMagnet.com)

### Europe, Middle East and Africa

6-9 The Square  
Stockley Park  
Uxbridge  
Middlesex UB11 1FW  
United Kingdom  
Tel: +44 203 178 7926  
Fax: +44 870 139 5156