



# AirMagnet Enterprise Analyzer

FOR THE CISCO UNIFIED WIRELESS NETWORK



The AirMagnet Enterprise Analyzer for Cisco is a software-only Wi-Fi analysis and troubleshooting solution designed specifically for Cisco's Unified Wireless Network. The Enterprise Analyzer software works with existing Cisco Wireless LAN controllers and lightweight access points to collect Wi-Fi data for expert analysis. AirMagnet's signature AirWISE engine automatically pinpoints more than 130 types of wireless factors that can impact network performance, then generates alarms with detailed explanations of events and 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 and cost-effective way to solve wireless issues while making the most efficient use of WLAN hardware resources.

## WIRELESS LAN ANALYSIS AND TROUBLESHOOTING

Remote WLAN Troubleshooting

Automated WLAN Analysis

AirWISE® Expert Advice

Wi-Fi Interference Analysis

Remote Connectivity Testing

Reporting and Compliance Auditing  
(Optional)





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## How it Works

1. **AirMagnet Enterprise Analyzer Software:** The AirMagnet software runs on most any Windows desktop or laptop PC. The software connects to any available Cisco Wireless LAN Controller to receive wireless traffic for analysis. The AirMagnet Enterprise Analyzer continuously works in conjunction with the controller to remotely control AP channel scanning for optimal packet capture. This coordination provides end-users with the same quality of analysis as if they were on-site with a stand alone AirMagnet Enterprise Analyzer.
2. **The Cisco Wireless LAN Controller:** The Cisco WLC allows the user to choose an appropriate AP to use for analysis and brokers the connection between the AirMagnet Enterprise Analyzer and the Cisco lightweight APs.
3. **Cisco LWAPP APs:** Light-weight Cisco APs in “Sniffer Mode” continuously capture wireless traffic and passes the data back to AirMagnet for analysis via the WLC.



## AirWISE: Built-In Wireless Expertise



At the heart of the Enterprise Analyzer is the AirWISE® engine, which automatically detects the root-cause of dozens of Wi-Fi issues across 802.11a/b/g networks. AirWISE® eliminates the need for users to manually interpret complex packet decodes and wireless data by proactively identifying and explaining more than 130 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.

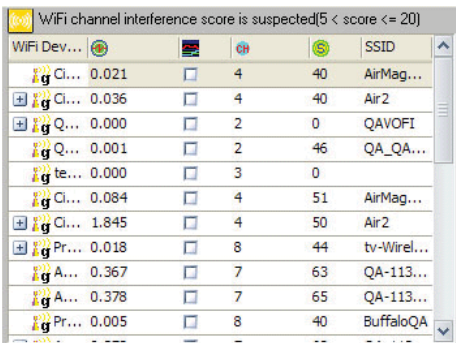
### Pinpoint the Cause of Any WLAN Problem

When a user reports a WLAN problem the real cause is usually not clear, especially if the end user is in a remote location. The AirMagnet Enterprise Analyzer lets network managers reach out to the source of the problem and immediately pinpoint the root-cause. The AirMagnet Enterprise Analyzer detects all types of wireless factors including interference issues, congested APs and channels, and automatically identifies specific device configurations that impact performance. AirMagnet Enterprise Analyzer alerts on dozens of traffic flow problems, media conflicts, QoS issues and much more. In addition to performance issues, AirWISE also performs a full security vulnerability analysis and detects all known types of wireless intrusions and hacking tools. This provides network staff with immediate, specific answers in a fraction of the time of manual investigation.

### Built-in Expert Advice

AirWISE provides detail on every Wi-Fi alert including the specific device and channel at the heart of the problem. AirWISE goes beyond the simple act of generating an alarm by explaining the background issue and technology related to the event, including instructive illustrations and advice on how to resolve or prevent the problem. This encyclopedic knowledge lets network managers use the application with a bare minimum of training while expanding their knowledge of wireless networking.

# Wi-Fi Interference Analysis



WiFi Dev...	Score	Ch	Ch	SSID
g Ci...	0.021	4	40	AirMag...
g Ci...	0.036	4	40	Air2
g Q...	0.000	2	0	QAVOFI
g Q...	0.001	2	46	QA_QA...
g te...	0.000	3	0	
g Ci...	0.084	4	51	AirMag...
g Ci...	1.845	4	50	Air2
g Pr...	0.018	8	44	tv-Wirel...
g A...	0.367	7	63	QA-113...
g A...	0.378	7	65	QA-113...
g Pr...	0.005	8	40	BuffaloQA

Interference Analysis

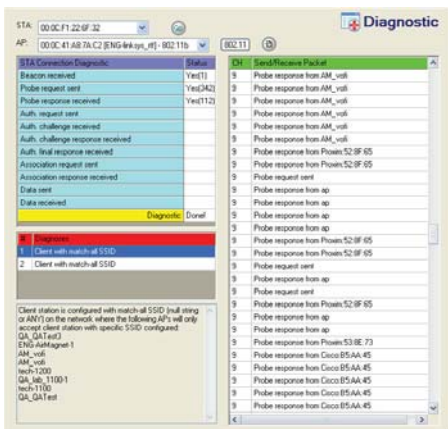
## Dedicated Interference View

RF interference and competition from other wireless devices are a constant source of performance problems for a wireless LAN. The AirMagnet Enterprise Analyzer includes a dedicated interference page that clearly explains the overall quality of the airwaves, and the types of interference impacting network performance.

AirMagnet's Interference Page accounts for 3 unique sources of interference, including Wi-Fi and non-802.11 sources. At the most fundamental level, AirMagnet analyzes noise and SNR to display the impact of non-802.11 devices on a particular channel. The software also accounts for co-channel and adjacent channel interference from Wi-Fi devices and displays precisely how much of your available bandwidth is consumed by each device. Finally, the software tracks and displays a consolidated list of hidden stations that can impact performance on the channel. This list allows staff to immediately grade the quality of their airwaves and pinpoint the cause of Wi-Fi interference.

# Remote Troubleshooting Tools

In addition to providing expert wireless LAN analysis, the AirMagnet Enterprise Analyzer includes a suite of troubleshooting tools enabling network managers to further investigate problems in any remote location where lightweight access points are deployed.



STA	AP	Status	Ch	Send/Receive Packet
00:0C:F1:22:6F:32	00:0C:41:A8:7A:C2 (802.11b)	STA Connection Diagnostic		
		Beacon received	9	Probe response from AM_wifi
		Probe request sent	9	Probe response from AM_wifi
		Probe response received	9	Probe response from AM_wifi
		Auth request sent	9	Probe response from AM_wifi
		Auth challenge received	9	Probe response from AM_wifi
		Auth challenge response received	9	Probe response from AM_wifi
		Auth final response received	9	Probe response from Power52:9F:65
		Association request sent	9	Probe response from Power52:9F:65
		Association response received	9	Probe request sent
		Data sent	9	Probe response from ap
		Data received	9	Probe response from ap
		Diagnostic Done!		
		1 Client with match all SSID	9	Probe response from Power52:9F:65
		2 Client with match all SSID	9	Probe request sent
			9	Probe response from ap
			9	Probe request sent
			9	Probe response from Power52:9F:65
			9	Probe response from ap
			9	Probe response from Power53:BE:73
			9	Probe response from Cisco:65:AA:45
			9	Probe response from Cisco:65:AA:45
			9	Probe response from Cisco:65:AA:45
			9	Probe response from Cisco:65:AA:45
			9	Probe response from Cisco:65:AA:45
			9	Probe response from Cisco:65:AA:45

Connection Diagnostic Tool

## Connection Troubleshooting

Directly troubleshoot connectivity problems between any client and AP in the network by viewing the step-by-step progress of a connection to pinpoint where the process is breaking down.

## Signal Quality Tool

With the Signal Quality Tools, network managers can identify very rapid fluctuations in signal quality that go overlooked by traditional signal measurements. This enables managers to see if a wireless signal is stable and predictable, while also providing the ability to actually see the presence of multipath in the environment.

## Jitter Testing

The Jitter Tool allows managers to measure the jitter between any phone and AP to help diagnose the source of voice problems.

# Vulnerability Assessment

The AirMagnet Enterprise Analyzer provides an ideal complement to Cisco's built-in security and IDS features by offering an automatic audit of the wireless environment to detect over 60 wireless vulnerabilities and threats.



AirWISE Alarm

## Vulnerability Assessment

The AirMagnet Enterprise Analyzer provides a complete, ongoing audit of Wi-Fi authentication and encryption at both the device and network level, and constantly scans the environment for weaknesses, such as insecure device configurations and vulnerable stations.

## Threat Detection

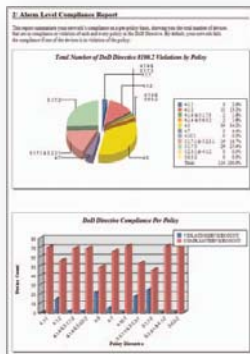
AirMagnet also detects scores of active threats that can endanger the network. The solution detects 20 types of denial-of-service attacks and dozens of wireless hacking tools and intrusion strategies. As always AirMagnet provides real-time detail on any offenders and can even generate email and syslog alerts.

# Integrated Reporting and Compliance Audit

AirMagnet offers an optional reporting and compliance auditing module. With the touch of a button, network managers can turn their analysis sessions into customized reports, or even perform a complete compliance audit of their wireless environment.

## Integrated Reporting

The integrated reporting feature delivers professional documentation of any Wi-Fi analysis or troubleshooting session. Users can leverage a library of pre-built professional reports or generate their own targeted reports. Reports cover all areas of management including RF statistics, device reports, as well as security and performance event reports.



## Compliance Reports

AirMagnet provides detailed compliance reports covering a variety of regulatory standards including SOX, HIPAA, PCI-DSS, DoD, GLBA, FISMA, Basel II, ISO 27001 and EU-CRD. Each report provides a step-by-step pass/fail assessment of each section of the standard and shows all non-complying devices. This makes it easy for companies to audit and document their regulatory compliance quickly and easily.

## Product Facts

Part #	Description
A2050	Enterprise Analyzer for Cisco Starter Kit; Single company license limited to a maximum of 3 Cisco Controllers
A2055	Enterprise Analyzer for Cisco; Single company license with support for unlimited number of Cisco Controllers
A2058	Reporting Module; Requires an A2050 or A2055 license

### Minimum System Requirements

Microsoft® Windows 2000 (Service Pack 4 or later) or XP (Service Pack 2) / Tablet PC Edition 2005 (Service Pack 2)

Intel® Pentium® III (1.6 GHz) or Higher. (Pentium® M 1.6Ghz or higher recommended)

256 MB Memory (512 MB recommended)

100 MB Hard Disk Space

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