

# AirMagnet VoFi Analyzer 3.0

## Release Notes

June 8, 2007

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### Introduction

AirMagnet VoFi Analyzer is a dedicated voice-over-wireless-LAN (VoWLAN) analysis tool that provides the industry's most comprehensive VoWLAN performance analysis and problem resolution. This *Release Notes* highlights the new features in this AirMagnet VoFi Analyzer 3.0 FCS release (Build 9821) as well as some known issues.

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### Special Notes

- If you have an older version of the VoFi application installed on your system, you **must** remove it before installing this new version.
- The WiMOS score on the screen may not reflect the actual call quality the user is experiencing with a phone (i.e., the WiMOS score could be very low even though the call quality appears to be very good) when there is no entry in AirMagnet VoFi Analyzer's phone book for that particular phone. In order to have a better WiMOS score, the phone book must be configured for each phone with a correct profile. The profile which includes the Codec type, voice frame duration, and jitter buffer for a particular phone plays an important role in calculating the WiMOS score. When a call is

detected by VoFi Analyzer, a default profile is used to calculate the WiMOS score for that phone model. Since AirMagnet VoFi Analyzer may not have default profiles for all phone models, the user may have to create a profile for a particular phone model which he or she is using. All phones on the VoFi network must be entered in the phone book with correct profiles.

Refer to “Chapter 4: Configuring a Phone Book” in the AirMagnet VoFi Analyzer User Guide for instructions on how to create a profile for each phone that you enter in a phone book.

Information regarding Codec type, voice frame duration, and jitter buffer for a particular phone model can be found at the vendor’s website.

AirMagnet VoFi Analyzer comes with default profiles for the following phone models:

- Hitachi Wireless IP 5000E-A
- Cisco 7920
- Cisco 7921
- SpectraLink 8000-Series Phones
- Vocera Badges

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## Key Features

The following are the key features of this AirMagnet VoFi Analyzer 3.0 (Build 9821) FCS release. Descriptions of these features will follow after the list.

- **Call Manager Integration**
- **SpectraLink SysLog Integration**
- **Phone Tracking**
- **Roaming Visualization**
- **Call Data Playback**
- **Vocera Server Integration**
- **Twelve New SysLog Alarms**
- **Support for 802.11a**
- **Comprehensive Voice Quality and WiFi Analysis Galleries**

### Cisco Call Manager Integration

The integration with Cisco Call Manager allows AirMagnet VoFi to extract detailed data for all calls that have occurred on the network. These data are critical for effective troubleshooting VoWLAN problems such as unexpected call termination.

**Note:** A special license is required in order to activate this feature.

The table below lists all the data the application can retrieve from the Cisco Call Manager.

#	Data
1	User
2	Phone Number
3	Phone Partition
4	IP Address
5	Device Name
6	Call Termination Reason
7	Number of Packets Sent
8	Number of Packets Received
9	Number of Packets Lost
10	Latency
11	Jitter
12	Codec Type
13	Max Frames Per Packet

## SpectraLink SysLog Integration

The SpectraLink SysLog integration allows users to access and view the various data collected in the SpectraLink SysLog directly from the AirMagnet VoFi Analyzer user interface.

The following instructions are prepared for users who would like to take advantage of this SpectraLink and AirMagnet integration.

### Connecting SpectraLink SysLog to AirMagnet VoFi:

1. Verify that you have the AirMagnet VoFi Analyzer SpectraLink Syslog integration license and that it is installed on the same machine as the AirMagnet VoFi Analyzer 3.0 software is.
2. With AirMagnet VoFi Analyzer running, verify that you have an interface that can be connected to the same network as your VoWLAN phone.
3. If you are using DHCP mode on the phone, enter the IP address of the interface on your AirMagnet VoFi Analyzer machine that is connected to the same network as your VoWLAN phone into the DHCP server so that the phones will receive it with a DHCP lease.

### Configuring VoFi Phones (NetLink 8000 Phones)

1. Turn off the phone.
2. Press and hold the green "Call" button.
3. While holding the green "Call" button, press and release the power button.
4. Continue to hold the green "Call" button until the Admin Login screen appears.
5. When the Admin Login screen appears, let go of the green "Call" button.
6. Enter your Admin password and press the "OK" button.
7. Using the Directional Pad, select the Diagnostics menu and press the "OK" button.
8. Using the Directional Pad, select the Syslog Mode menu and press the "OK" button.
9. Using the Directional Pad, select the Full option and press the "OK" button. An asterisks (\*) will show up next to the Full option.

10. Press the right most soft key to go back to the Diagnostics menu and then once again to go back to the main menu.

### **Setting Up Static IP Address (Do NOT follow these steps if your phone is using DHCP):**

11. Using the Directional Pad, select the Network Config menu and press the "OK" button.
12. Using the Directional Pad, select the IP Addresses menu and press the "OK" button.
13. Using the Directional Pad, select Static IP and press the "OK" button.
14. Using the Directional Pad, select Syslog Server IP and press the "OK" button.
15. Enter in the IP address of the interface on your AirMagnet VoFi Analyzer machine that is connected to the same network as your VoWLAN phone and then press the "OK" button.
16. Press the right most soft key to go back to the Static IP address menu.

### **Restarting the Phone:**

17. Leave the phone alone for 10-15 seconds and allow it to reboot. (Syslog is now set up on your NetLink 8000 phone once the phone has rebooted.)
18. Launch AirMagnet VoFi Analyzer and begin a phone call with the VoWLAN phone that you just set up. (You should start seeing Syslog data show up for that phone on the AirMagnet VoFi Analyzer's VoFi Calls screen.)

### **Configuring VoFi Phones (NetLink e340 and i640 Phones):**

1. Turn off the phone.
2. Press and hold the red "Hang Up" button.
3. While holding the red "Hang Up" button, press and release the power button.
4. Continue to hold the red "Hang Up" button until the Admin Menu screen appears.
5. Using the Up and Down buttons on the left side of the phone, select the Diagnostics menu and press the center button between the up and down buttons on the left side of the phone.
6. Using the Up and Down buttons on the left side of the phone, select the Syslog Mode menu and press the center button between the up and down buttons on the left side of the phone.
7. Using the Up and Down buttons on the left side of the phone, select the Full option and press the center button between the up and down buttons on the left side of the phone. An asterisks (\*) will show up next to the Full option.
8. Press the right most soft key to go back to the Diagnostics menu and then once again to go back to the main menu.

### **Setting Up Static IP Address (Do NOT follow these steps if your phone is using DHCP):**

9. Using the Up and Down buttons on the left side of the phone, select the Network Config menu and press the center button between the up and down buttons on the left side of the phone.

10. Using the Up and Down buttons on the left side of the phone, select the IP Addresses menu and press the center button between the up and down buttons on the left side of the phone.
11. Using the Up and Down buttons on the left side of the phone, select Static IP and press the center button between the up and down buttons on the left side of the phone.
12. Using the Up and Down buttons on the left side of the phone, select Syslog Server IP and press the center button between the up and down buttons on the left side of the phone.
13. Enter the IP address of the interface on your AirMagnet VoFi Analyzer machine that is connected to the same network as your VoWLAN phones and then press the center button between the up and down buttons on the left side of the phone.
14. Press the right most soft key to go back to the Static IP address menu.

### **Restarting the Phone:**

15. Leave the phone alone for 10-15 seconds and allow it to reboot. (Syslog is now set up on your NetLink 8000 phone.)
16. Launch AirMagnet VoFi Analyzer and begin a phone call with the VoWLAN phone that you just set up. (You should start seeing Syslog data show up for that phone on the VoFi Calls Screen.)

## **Phone Tracking**

This feature allows the application to lock on a selected phone so that the user can conduct a focused analysis of that phone in real time. To activate this feature, the user needs to select a call segment from the VoFi Calls screen or a VoFi device from the WiFi Overview screen and then click the Follow Phone button in the menu bar.

## **Roaming Visualization**

This feature allows the user to visualize the movement of phones in real time as they roam from one AP to another or across different channels.

## **Call Data Playback**

This feature allows the user to play back the data involving a call or device during a selected time period.

## **Vocera Integration**

The integration with Vocera enables the application to synchronize with the Vocera server. As such, any data change in the Vocera server database will be automatically updated in VoFi Analyzer's phone book.

## **New SysLog Alarms**

This AirMagnet VoFi Analyzer 3.0 release comes with 12 new SysLog alarms. With these new alarms, the application is now capable to detect and alert the user on the following issues in their network:

- High retry rate

- High multicast rate
- High jitter rate
- AP servicing too many active calls
- High late rate
- High broadcast rate
- High loss rate
- Weak-signal AP
- Missing phones
- High drop rate
- Missing “End Call” message
- Handoff failure

### **Support for 802.11a**

This feature enables the application to identify wireless devices using the 802.11a media and capture various data involving 802.11a-capable devices on the network.

### **Comprehensive Voice Quality and WiFi Analysis Galleries**

AirMagnet VoFi Analyzer 3.0 is loaded with a rich arsenal of galleries for voice quality and WiFi analysis. It provides nearly 30 default galleries in five major categories. In addition, users can also create their own custom galleries using data of their own choice.

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## **System Requirements**

- Intel® Pentium® M processor at 1.2 GHz or higher;
- 1 GB of memory;
- 2 GB of available hard drive space;
- An AirMagnet-supported wireless network card (see next page);
- Microsoft® Windows® Vista or XP operating system (Service Pack 2), or Tablet PC Edition 2005 (Service Pack 2).

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## **Supported WiFi Cards**

An AirMagnet-supported WiFi card is required in order to install and operate AirMagnet VoFi Analyzer. Visit <http://www.airmagnet.com/products/spec.php?prod=vofi> for a complete, up-to-date list of WiFi cards that AirMagnet supports.

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## Launching AirMagnet VoFi Analyzer

### Note:

An 802.11 wireless network card is required in order to run the AirMagnet VoFi Analyzer. Therefore, you must have either an external or an internal wireless card in place (inserted or installed) with its own driver on the PC when you launch AirMagnet VoFi Analyzer. Otherwise, the AirMagnet VoFi Analyzer will not start. See [Supported WiFi Cards](#) above.

### To launch AirMagnet VoFi Analyzer:

1. From your desktop, click Start>All Programs>AirMagnet VoFi >AirMagnetVoFi . The AirMagnet VoFi Analyzer default start screen appears. See Figure 1.

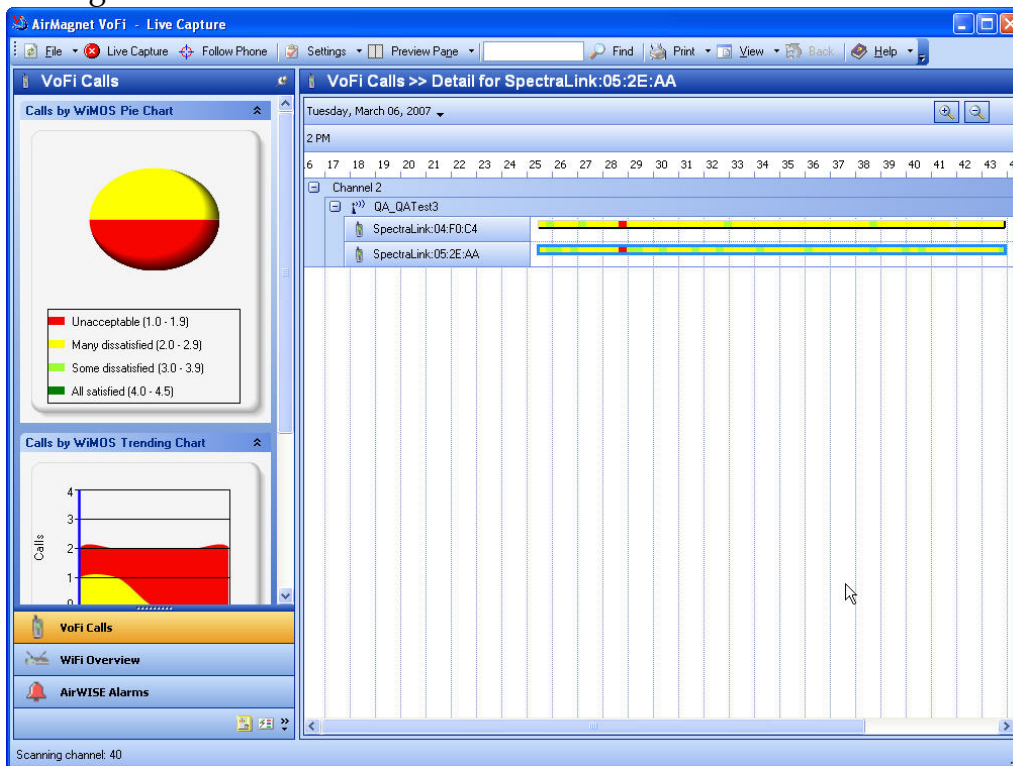


Figure 1: VoFi Calls Screen (default AirMagnet VoFi Start screen)

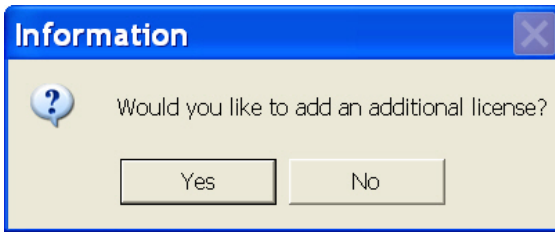
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## Updating Software License

This section provides instructions for upgrading VoFi 3.0 Standard to VoFi 3.0 Pro which supports IPBX (Call Manager) integration.

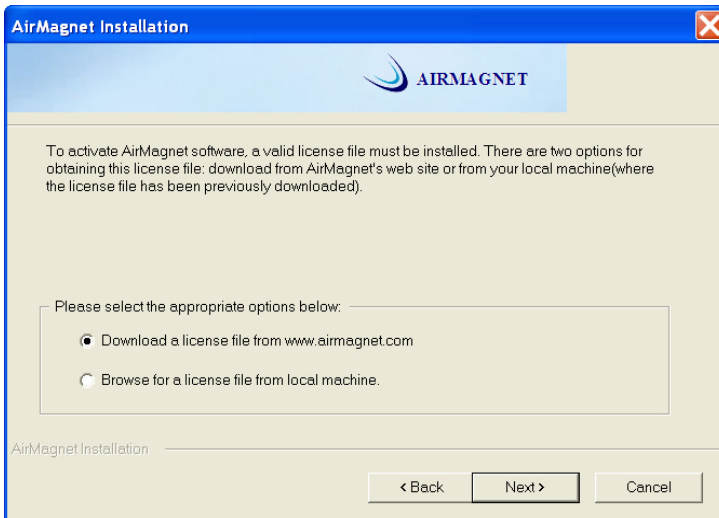
### To upgrade your software license:

1. From your desktop, click Start>All Programs>AirMagnet VoFi >Update License. An Information dialog box appears. See Figure 2.



**Figure 2: Information Dialog Box**

2. Click **Yes**. The AirMagnet license option screen appears. See Figure 3.



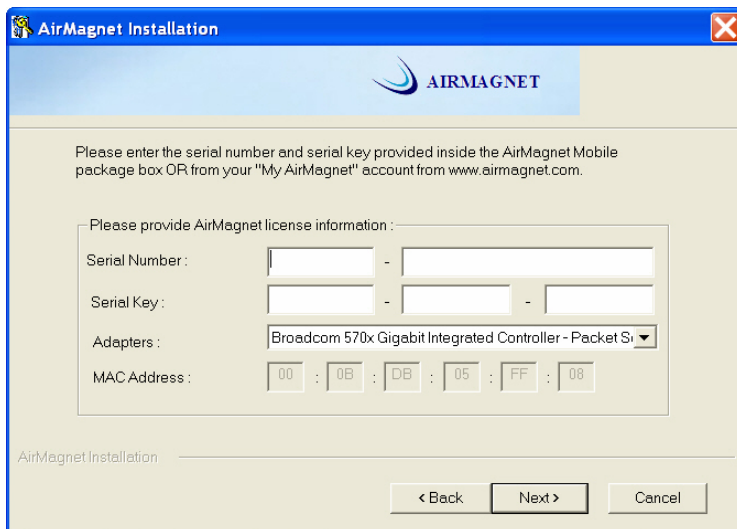
**Figure 3: Getting Software License**

**Note:**

*As shown in Figure 3, there are two options for updating your software license: download from the Internet or upload from the local machine. The former requires that you have a valid serial number and serial key that entitles you to get the license from AirMagnet's web site; the latter assumes that you have a valid software license available on your PC.*

**Updating your software license over the Internet:**

1. From Figure 13, select **Download a license file from www.airmagnet.com** and click **Next**. The license information screen appears. See Figure 4.



**Figure 4: Entering License Information**

2. Enter the serial number and the serial key for the update license you have purchased, select the adapter, and click Next . Your license will be updated once the screen closes.

**Note:**

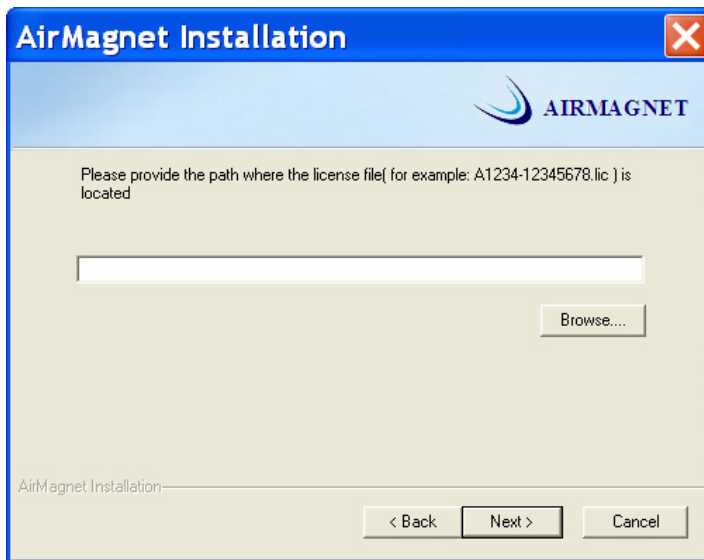
*The AirMagnet VoFi Analyzer A2215 update license must be tied to the MAC address of the same adapter to which the original A2200 license is tied.*

**Updating your software license from a local machine:**

**Note:**

*The procedures documented below assume that you have a valid update license stored on your PC. Before updating your license, make sure that you know exactly where on your PC the license file is located.*

1. From Figure 3, select Browse for a license file from local machine and click Next . The Windows Open dialog box appears. See Figure 5.



**Figure 5: Browsing for a license file**

2. Click Browse.... The Windows Open dialog box appears.
3. Locate the license file on your system, select it and click Open. Your software will be updated once the screen closes.

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## Basic Problem-Solving Scenarios

AirMagnet VoFi Analyzer can be used in either of the following scenarios:

1. If a user would like to see all the calls coming in and out the network, then they can use Smart Scan or manually select multiple channels to be scanned.
2. If a user is trying to solve an issue involving a specific device, then the application should be set to scan only the channel which the device is using.

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## Known Issues

1. Some Reports, e.g., WiMOS Trending, WiR-Value Trending, etc. may take a long time to open on the screen. (12587)
2. Channel Bandwidth Utilization reports may not display correct channels. As a result, some reports may show invalid channels. (16148)
3. The Intel® 3945 Wireless Card does not work with the Intel 11.0 driver. The user may have to use a lower version of the driver when using an Intel 3945 Wireless Card. (16297)
4. Using the Settings>Configure (even if you don't go to the Scan Tab) and then clicking OK may automatically cancel the Follow Phone operation that you have activated.
5. The chart in the Detailed Call View section may show only one alarm when in fact multiple alarms are generated at the same time. (16419)

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## Release History

- 06/08/2007: AirMagnet VoFi Analyzer 3.0 FCS Release, Build # 9821.
- 05/04/2007: AirMagnet VoFi Analyzer 3.0 Beta Release 3, Build # 9449.
- 03/29/2007: AirMagnet VoFi Analyzer 3.0 Beta Release 2, Build # 9354.
- 03/09/2007: AirMagnet VoFi Analyzer 3.0 Beta Release 1, Build # 9301.

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## Technical Support

Technical support for registered AirMagnet products is available from the following sources:

- Phone: (Toll-free) 1- 877- MAGNET5 (624-6385); or (408) 400-0200 (Option 3),  
Monday through Friday, 6:00 AM - 6:00 PM, Pacific Standard Time.
- Fax: (408) 744-1250
- Email: [support@airmagnet.com](mailto:support@airmagnet.com)
- Web: [www.airmagnet.com](http://www.airmagnet.com)