

AirMagnet Hardware Sensor Installation Guide

Thank you for purchasing the AirMagnet Hardware Sensor. Implementing the AirMagnet Distributed System with hardware sensors will help you to effectively troubleshoot, monitor and administer WLANs. This installation guide will help you configure the AirMagnet Hardware Sensor as part of the AirMagnet Distributed system.

Package Contents

Be sure the following items are in the package. If the package is not complete, please contact AirMagnet technical support, or return the package to the vendor or dealer where you purchased the product.

Basic Package Checklist

- Installation Guide
- AirMagnet hardware sensor and table mount stand
- RJ 45 Ethernet crossover cable
- Serial cable
- Power supply

Optional AirMagnet Power Over Ethernet (POE) package (Contact AirMagnet Inc. to receive this package)

- Quick installation guide for the POE unit.
- Power Over Ethernet (POE) base unit.
- 60cm CAT5 Ethernet UTP/STP straight through cable.
- 48 V DC power adapter
- Power cord

LEDs on the AirMagnet Hardware Sensor

- Power LED- Green when the AirMagnet Hardware Sensor is receiving power.
- Network connectivity LED- Green when the sensor is connected correctly to the network.
- Wireless Interface LED- Green when the wireless radio is present in the right-hand slot inside the sensor box. If this LED does not glow, please contact AirMagnet technical support.

- Reserved LED - not in use.

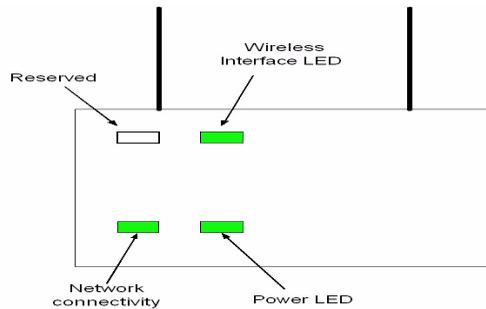


Fig-1: LEDs on the AirMagnet Hardware Sensor

Connectors on the AirMagnet Hardware Sensor.

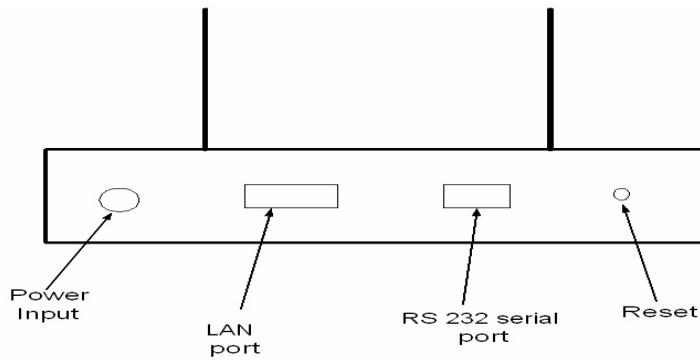


Fig-2: Connectors on the AirMagnet Hardware Sensor.

- Power input - Connect the external power supply to this input.
- LAN - Used to connect the AirMagnet Hardware Sensor to the network or to connect to a computer during the configuration of the box.
- RS232 - Used to configure the AirMagnet Hardware Sensor using the serial configuration method and also for continued maintenance using Hyperterminal. Recommended for Advanced users only.
- Reset - Used to reset the AirMagnet Hardware Sensor to factory defaults.

Power Options

The user has two options to provide power to the AirMagnet Hardware Sensor. Either use the supplied AC to DC Power supply in the basic package or use the optional Power Over Ethernet (POE) method.

A) Applying Power to the AirMagnet Hardware Sensor using the external AC to DC Power supply in the basic package

- 1) Plug one end of the power supply to a power outlet.
- 2) Connect the other end of the cord to the AirMagnet Hardware Sensor.

B) Applying power to the AirMagnet Hardware Sensor using the optional Power Over Ethernet (POE) method.

Power Over Ethernet allows -48 Volt DC power to be supplied using the existing Cat 5 cable which also carries data. AirMagnet Hardware Sensors accept -48 V as an optional power source. However it is not directly compatible with Cisco's Power Over Ethernet supplied by its Catalyst range of switches or the IEEE 802.3af POE standard. The optional AirMagnet POE package can be bought directly from AirMagnet Inc.

Note: Please contact your network administrator to make sure that the Ethernet cable plant has standard Cat5 cable installed that meets the POE requirements.

Connecting the AirMagnet sensor using the AirMagnet power injector model provided in the optional package.

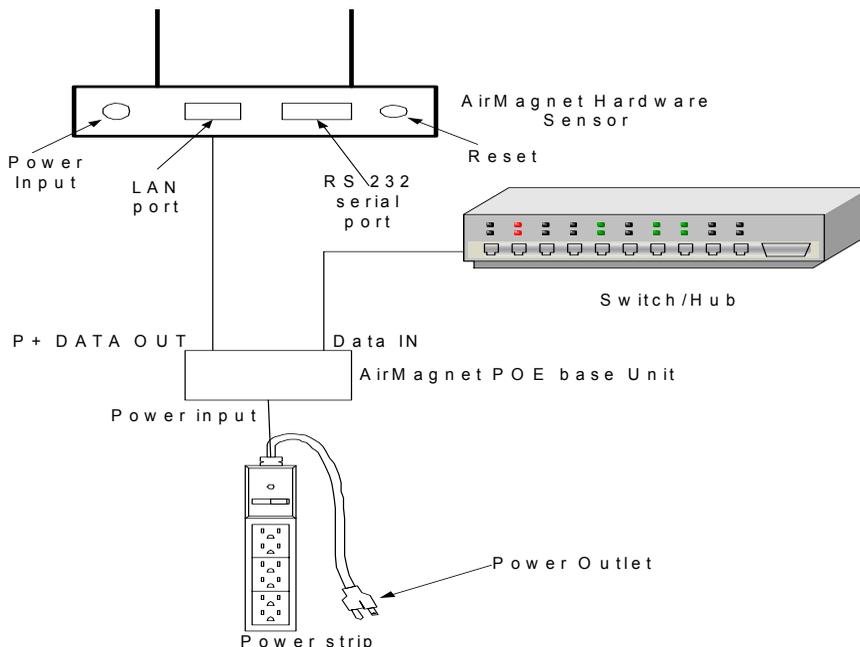


Fig-3: *Applying power to AirMagnet Hardware Sensor by the POE method*

- 1) Connect the supplied -48V DC power adapter to the power outlet.
- 2) Connect the other end of the adapter to the power input of the POE base unit.
- 3) Connect the Data IN to the network hub/switch and the P+ DATA OUT to the LAN port on the AirMagnet Hardware Sensor.

Note: Please contact AirMagnet Inc. to purchase the optional AirMagnet power injector model equipment or the AirMagnet crossover module.

Installation Procedure

Note: Please make sure that the AirMagnet Management Server is installed and running on the network. The initial setup procedure will also require a computer to communicate to the AirMagnet Hardware Sensor. Users have the option of using the web-based installation method (A) or the serial port configuration method(B).

(A) Web-Based Installation

- 1) The Hardware Sensor comes with a factory default IP address of 192.168.0.100. Set the IP address of your computer so that it can communicate with the AirMagnet Hardware Sensor. Assign a static IP address to the computer in the same subnet (say 192.168.0.77). Use a 255.255.255.0 subnet mask and 192.168.0.1 as the gateway IP address.
- 2) Connect the AirMagnet Hardware Sensor to a separate network hub/switch for the initial configuration using a RJ 45 Ethernet straight-through cable or connect the Sensor directly to the computer using the supplied RJ 45 Ethernet crossover cable.
- 3) Power ON the AirMagnet Hardware Sensor.
- 4) The AirMagnet Hardware Sensor communicates with the AirMagnet distributed console by using SSL and TLS at TCP port 443. Launch the browser and enter **https://192.168.0.100** in the URL address box.
- 5) If a security alert message pops up, click Yes.

- 6) Enter **AirMagnetSensor** as the username and password as **airmagnet** in the pop-up box to be redirected to the sensor information page.
- 7) Click on the sensor status page to get the name of the sensor, IP and MAC address, software version and the connected AirMagnet Management Server.
- 8) To make any changes, click on Sensor Configuration as shown in Fig(4).



Fig-4: *Sensor configuration page*

- 9) Enter the name of the existing AirMagnet Management Server (**192.168.0.1** by default) and the sensor shared secret key. The server name can be the IP address of the server or a DNS assigned name.
- 10) Change the Sensor name depending on its location. The default Sensor name is amsensor. It is important to ensure that each sensor has a unique name.
- 11) Verify that the log level is set to **Log Important Event** for the AirMagnet hardware sensor.
- 12) To set the IP address for the Hardware Sensor use the drop down box. The user can select the **static IP** address option (specify IP address, subnet mask and gateway address) or select the **DHCP** option to get these IP parameters automatically.
- 13) Set the time-zone based on the location of the Sensor. Select the day-light savings option if applicable.
- 14) Click Apply.
- 15) The sensor will reboot automatically.
- 16) After the completion of the reboot process, continue using the crossover cable if you have an autosensing MDI/MDIX hub/switch. If not, connect the AirMagnet Hardware Sensor to the corporate network hub/switch using a straight through cable.
- 17) Change the static IP address of 192.168.0.XXX of the machine to your corporate network IP settings, so that you can now connect to the corporate network.

18) Browse to the AirMagnet Hardware Sensor web page (**https://IP address**) to check if the license has been granted to the AirMagnet Hardware Sensor. Use **admin** as the username and use the **password of the AirMagnet Management Server**.

Note: If the DHCP option has been selected, the new IP address assigned to the Hardware Sensor can be checked from the sensors tab on the AirMagnet Management Server status page. Also disregard the MAC address printed on the back of the AirMagnet Hardware Sensor.

Once the license has been granted, the left hand side of the AirMagnet Distributed console is updated to show the presence of the new AirMagnet Hardware Sensor.

(B) Serial Port Installation (Alternative Installation Procedure)

- 1) Connect the console port of the AirMagnet Hardware Sensor to the serial port of the computer using the supplied serial cable.
- 2) Click on Start -->Programs-->Accessories-->Communication-->Hyperterminal
- 3) Select the appropriate COM port to which the AirMagnet Hardware Sensor is connected.
- 4) Use the following settings for the Hyperterminal session: **115200** bits per second, **8** data bits, **no** parity, **1** stop bit and flow control **none**.
- 5) Connect the sensor to the network using a straight-through RJ45 Ethernet cable.
- 6) On the Hyperterminal screen, you will get the “**config>**” prompt.
- 7) config> set network

This command is used to set the IP address parameters (IP address, subnet mask and the default gateway) for the AirMagnet Hardware Sensor.

- 8) config>set time

This command is used to set the Sensor timezone and daylight savings option. The time on the Hardware Sensor is set when the AirMagnet Hardware Sensor communicates with the AirMagnet Management Server.

- 9) config> set sensor

This command is used to configure the Sensor name, AirMagnet Management server name or IP address and the sensor shared key. The user will be asked to reboot the AirMagnet Hardware Sensor.

- 10) The AirMagnet hardware sensor will reboot.

```
config>set network
DHCP Enabled (Y/N)?n
IP Address(10.1.1.115):10.1.1.116
Subnet Mask(255.255.255.0):255.255.255.0
Default Gateway(10.1.1.1):10.1.1.1
Is the above information correct (Y/N)?y

config>set sensor
Sensor Name(amsensor3):amsensor3
Management Server Name(10.1.1.81):10.1.1.81
Sensor Shared Key(12345):12345
The system is setting the following configuration:
Sensor Name:          amsensor3
Management Server Name: 10.1.1.81
Sensor shared key:     12345
Is the above information correct(Y/N)?y
You must reboot the sensor to take the setting effects
Do you want to reboot now(Y/N)?y
```

Fig-5: Serial port configuration

11) Browse to the AirMagnet Hardware Sensor web page (**https://IP address**) to check if the license has been granted to the AirMagnet Hardware Sensor. Use **admin** as the username and use the **password of the AirMagnet Management Server**.

Show Commands to verify configuration settings

1) config> show sensor

This command will display the name of the Sensor, software and system version and sensor uptime.

2) config> show network

This command will display the current network configuration.

3) config> show time

This command will display the Sensor current time, timezone and whether the daylight savings option has been enabled or not.

Optional Maintenance Commands

1config>reboot

This command is used to reboot the AirMagnet Hardware Sensor.

2config>restore

This command is used to restore the AirMagnet Hardware Sensor to factory defaults.

3config>ping [-s | -c] host-ip

This command is used to ping other hosts on the network.

```
4config>update [sys | app]
```

The above commands are used to update the kernel and the AirMagnet application software. The user is prompted for the location of a TFTP server to get the latest update.

International Power Standards

Please contact AirMagnet technical support for power specification for locations outside USA.

Register AirMagnet

Registering your AirMagnet Distributed System will ensure that you are eligible for product support, product update information, and other benefits. Complete the online user registration form at <http://www.AirMagnet.com/support.register.htm>

Contacting AirMagnet

Corporate Headquarters:

AirMagnet, Inc.

894 Ross Drive, Suite 200,

Sunnyvale, CA 94089

Tel: (408) 400-0200

Fax:(408) 744-1250

Web site: www.airmagnet.com

Technical Support

You can contact the AirMagnet Technical Support Group in several ways:

Toll Free Number: (877)-MAGNET5 or (877) 624-6385

or (408) 400-0200

E-mail: Support@AirMagnet.com

Technical Support is available Monday through Friday, from 8:00 A.M. to 5:00 P.M Pacific Time.

AirMagnet offers an Annual Subscription Service, which covers telephone support, software upgrades, and defective hardware exchanges after the initial support period expires. Please contact your AirMagnet authorized reseller or AirMagnet Technical Support for more details on the Annual Subscription Service.

