

SpectraGuard Sensor

Installation Guide

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AirTight Networks will not be liable to customer or any other party for any indirect, incidental, special, consequential, exemplary, or reliance damages arising out of or related to the use of SpectraGuard Sensor under any legal theory, including but not limited to lost profits, lost data, or business interruption, even if AirTight knows of or should have known of the possibility of such damages. Regardless of the cause of action or the form of action, AirTight's total cumulative liability for actual damages arising out of or related to the use of SpectraGuard Sensor will not exceed the price paid for SpectraGuard Sensor.

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Intellectual Property Notice: One or more features and components in this product have patents pending, which are owned by AirTight Networks, Inc.

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body. If this device is going to be operated in 5.15 ~ 5.25GHz frequency range, then it is restricted in indoor environment only.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

End User License Agreement

This End User License Agreement ("EULA") governs the terms and conditions of use of AirTight products. If a Purchase Order has been issued by the Customer to AirTight for the use of this product, additional terms listed in the Purchase Order will also apply. In the event of a conflict between this EULA and a Purchase Order, the terms of the Purchase Order will prevail.

1. Definitions

Capitalized terms used in this EULA are defined in this Section 1 or the section in which they are first used.

1.1 "Customer" means an end-user or a business entity that purchases AirTight products and operates it under the terms and conditions described in this agreement.

1.2 "AirTight" means AirTight Networks, Inc., AirTight Networks Private Limited or its related companies and subsidiaries.

1.3 "Delivery" means delivery of the Hardware and Software.

1.4 "Documentation" means the standard end-user technical documentation and specifications that AirTight supplies with the Hardware and Software. Advertising and marketing materials are not Documentation.

1.5 "Error" means a reproducible failure of the Software or Hardware to perform in substantial conformity with its Documentation.

1.6 "Hardware" means Sensor, Sentry, Appliance or any other hardware component provided by AirTight.

1.7 "Intellectual Property Rights" means copyrights, trademarks, service marks, trade secrets, patents, patent applications, moral rights, contractual rights of non-disclosure or any other intellectual property or proprietary rights, however arising, throughout the world.

1.8 "Release" means any Update or Upgrade if and when these are made available by AirTight. In the event of a dispute as to whether a particular Release is an Update or an Upgrade, AirTight's published designation will be final.

1.9 "Software" means the software provided by AirTight to Customer (in object code format or loaded on AirTight Hardware) and any Release thereto if and when such Releases are made available by AirTight.

1.10 "Update" means, if and when available, any error corrections, fixes, workarounds or other maintenance releases in respect of the Software provided by AirTight to Customer that do not add additional functionality to the Software.

1.11 "Upgrade" means, if and when available, new releases or versions of the Software, that materially improve the functionality of, or add material functional capabilities to the Software and in respect of which AirTight charges Customer additional license fees.

2. Terms of Sale

2.1 Scope. This EULA together with any Purchase Order(s) governs all transactions between the parties with respect to the Hardware and Software provided by AirTight. This EULA does not require either party to enter into such transactions, but together with the Purchase Order specifies the terms and conditions of such transactions if and when they take place.

2.2 Software. All software provided by AirTight is licensed, not sold. Customer's right to use such Software is subject to the license granted in Section 3 of this EULA.

2.3 Installation. Customer will be responsible for installing the Software and Hardware unless Customer purchases Installation Services from AirTight pursuant to a separate Professional Services Agreement.

3. License Grant

3.1 Hardware and Software License. For each unit of Hardware and Software that is supplied to

Customer, AirTight grants Customer a non-exclusive, non-transferable (except as provided in Section 9.5), non-sub licensable license during the term of this EULA, to install and execute such Software and Hardware for Customer's own business purposes. Each license is subject to the terms and conditions of this EULA, including but not limited to this Section 3 and Customer's obligation to pay the applicable license fees for the use of such Hardware and Software.

3.2 Restrictions on Use. Notwithstanding the license grant in Section 3.1, Customer may not: (a) use the Software except as expressly permitted under Section 3.1; (b) separate the component programs of the Software for use on different computers; (c) adapt, alter, publicly display, publicly perform, translate, create derivative works of or otherwise modify the Software; (d) sublicense, lease, rent, loan, distribute or otherwise transfer the Software to any third party (except as provided in Section 9.5); (e) reverse engineer, decompile, disassemble or otherwise attempt to derive the source code for the Software except to the extent expressly permitted by applicable law notwithstanding this restriction, to obtain information necessary to render the Software interoperable with other software; provided, however, that Customer must first request such information from AirTight and AirTight may, in its discretion, either provide such information to Customer or impose reasonable conditions, including a reasonable fee, on such use of the source code for the Software to ensure that AirTight's and its suppliers' proprietary rights in the source code for the Software are protected; (f) remove, alter or obscure any proprietary notices on the Software or Documentation; (g) allow third parties to access or use the Software, including but not limited to ASP, OEM or time-sharing arrangements. Under no circumstances may Customer install or execute the Software on more than one computer at the same time; or (h) capture screenshots of the Software and share it with other people without written consent of AirTight for any purpose including but not limited to competitive analysis, copying or reverse engineering.

4. Term and Termination

4.1 Term. The term of this EULA will begin on the Effective Date and will continue indefinitely unless terminated pursuant to this Section 4.

4.2 Termination for Cause. Either party may terminate this EULA for cause by giving the breaching party written notice of termination, and specifying in such notice the alleged breach. The breaching party will have a grace period of thirty (30) days after such notice is served to cure the breach described therein. If the breach is cured within the thirty (30) day grace period, then this EULA will remain in effect. If the breach is not cured within such period, then this EULA will automatically terminate upon the conclusion of the thirty (30) day grace period, unless the parties agree in writing to extend such period.

4.3 Effects of Termination. Upon termination of this EULA for any reason: (a) all unfulfilled Purchase Orders will be cancelled at AirTight's discretion; (b) any amounts owed to AirTight under this EULA and any Purchase Order before such termination will be immediately due and payable; (c) all license rights granted in this EULA will immediately terminate and Customer must promptly stop all use of the Software; (d) AirTight's obligation to provide services under any Service Schedule attached to the Purchase Order terminates; (e) Customer must erase all copies of the Software from Customer's computers, and destroy all copies of the Software and Documentation on tangible media in Customer's possession or control or return such copies to AirTight in accordance with Section 6.5; and (f) Customer must certify in writing to AirTight that it has returned or destroyed such Software and Documentation. Sections 4.3, 5, 6.6, 7, 8 and 9 will survive the expiration or termination of this EULA. The obligations under Section 8 will, however, survive only for claims based on use of the Hardware or Software during the licensed term. Termination of this EULA will not affect Customer's right to otherwise use or transfer the Hardware purchased from AirTight once Software is removed.

5. Proprietary Rights

Proprietary Rights. Customer acknowledges and agrees that the Software including but not limited to its sequence, structure, organization and source code, contains Intellectual Property Rights of AirTight and its

suppliers, including without limitation valuable trade secrets. The Software is licensed and not sold to Customer, and no title or ownership to such Software or the Intellectual Property Rights embodied therein passes as a result of this EULA or any act pursuant to this EULA. The Software (and all Intellectual Property Rights therein) is the exclusive property of AirTight and its suppliers, and all rights in and to the Software not expressly granted to Customer in this EULA, are reserved. AirTight owns all copies of the Software, however made. Nothing in this EULA will be deemed to grant, by implication, estoppels or otherwise, a license under any of AirTight's existing or future patents (or the existing or future patents of its suppliers). The Software and related materials contain trade secrets of AirTight and Customer will not disclose the Software, Documentation or any other AirTight confidential and/or proprietary information to any third party.

6. Limited Warranties

6.1 Media. For the period of one (1) month after Delivery (as defined in Section 1.2 of the Purchase Order) (the "Media Warranty Period"), AirTight warrants to and for the sole benefit of Customer that the media on which the Software is provided to Customer will be free of defects in materials and workmanship. Customer's exclusive remedy and AirTight's sole liability for breach of this warranty is that AirTight will, at its own expense, replace any defective media returned to AirTight within the Media Warranty Period. This warranty does not apply to damage resulting from misuse, abuse, or neglect.

6.2 Software. For the period of one (1) month after Delivery (as defined in Section 1.2 of the Purchase Order) (the "Software Warranty Period"), AirTight warrants to and for the sole benefit of Customer that, subject to Section 6.4, any Software, when used as permitted under this EULA and in accordance with the instructions in the Documentation, will operate substantially without Error. Customer's exclusive remedy and AirTight's sole liability for breach of this warranty is that AirTight will, at its own expense, use commercially reasonable efforts to make available to Customer, by Internet download, Updates (that are intended to correct such Errors) that AirTight makes generally available, for Errors reported to AirTight during the Software Warranty Period. Any Error correction provided to Customer will not extend the original Software Warranty Period.

6.3 Hardware. For the period of one (1) month after Delivery (as defined in Section 1.2 of the Purchase Order) (the "Hardware Warranty Period"), AirTight warrants to and for the sole benefit of Customer that, subject to Section 6.4, any Hardware sold to Customer will be free of substantial defects in materials and workmanship. As Customer's exclusive remedy and AirTight's sole liability for breach of this warranty, AirTight will, at its election, repair or replace any defective Hardware returned to AirTight (in accordance with Section 6.5) within the Hardware Warranty Period. If AirTight is unable to repair or replace such Hardware, then it will accept a return of such Hardware (in accordance with Section 6.5) and refund to Customer the price paid by Customer for the Hardware. Any remedy provided under this Section 6.3 will not extend the original Hardware Warranty Period.

6.4 Exclusions. AirTight will have no obligation under this EULA to correct, and AirTight makes no warranty with respect to, Errors caused by: (a) improper installation of supported Software or Hardware; (b) changes that Customer has made to supported Software or Hardware; (c) use of the supported Software or Hardware in a manner inconsistent with the Documentation; (d) combination of supported Software and Hardware with hardware or software not provided by AirTight; (e) malfunction, modification or relocation of Customer's servers; or (f) Customer's failure to make reasonable backups.

6.5 Returns Procedure. To return an item of Hardware for any reason permitted under this EULA, Customer must notify AirTight in writing or by fax of its proposed return, and request a tracking number. AirTight will issue tracking numbers in accordance with its then-current standard procedures. Within ten (10) days of receipt of the tracking number, Customer will return the relevant Hardware to AirTight (a) in accordance with AirTight's return policies, procedures and instructions; (b) freight prepaid; and (c) in its original shipping carton with the tracking number displayed on the outside of the carton. Customer bears the

risk of loss or damage to any returned Hardware until such Hardware is received by AirTight at its premises. AirTight reserves the right to refuse to accept any returned Hardware that does not bear a tracking number on the outside of the carton or which otherwise does not comply with AirTight's return policies, procedures and instructions.

6.6 Disclaimer. Except for the express warranties in Sections 6.1, 6.2, and 6.3, AirTight hereby disclaims all other warranties, whether express, implied or statutory, including but not limited to the implied warranties of merchantability, fitness for a particular purpose, accuracy, result, effort, title and non-infringement. There is no warranty that the Software will be error free, or that the Software or Hardware will operate without interruption or will fulfill any of Customer's particular purposes or needs.

7. Limitation of Liability

Limitation of Damages. AirTight will not be liable to Customer or any other party for any indirect, incidental, special, consequential, exemplary or reliance damages arising out of or related to this EULA under any legal theory, including but not limited to lost profits, lost data or business interruption, even if AirTight knows of or should have known of the possibility of such damages. Regardless of the cause of action or the form of action, AirTight's total cumulative liability for actual damages arising out of or related to this EULA relating to a particular piece of Hardware or Software will not exceed the price paid for such Hardware and Software. The limitations of this Section 7 will not apply to or otherwise limit AirTight's liability for indemnification claims under Section 8. This Section 7 will apply even if an exclusive remedy of Customer hereunder has failed of its essential purpose. Customer acknowledges that the prices and fees reflect the allocation of risk set forth in this Agreement and that AirTight would not enter into this Agreement without these limitations on its liability.

8. Indemnification

8.1 AirTight's Obligation. Subject to Sections 8.2 and 8.3, AirTight will defend at its own expense any action brought against Customer by a third party, to the extent that: (a) such action is based upon a claim that the Hardware or Software infringes upon any U.S. copyrights or U.S. patents registered or issued as of the Effective Date, or (b) that the negligence of AirTight personnel caused personal injury or property damage. AirTight will pay those costs and damages finally awarded against Customer in any such action that are specifically attributable to such claim, or those costs and damages agreed to in a monetary settlement of such action. The foregoing obligations are conditioned on Customer: (a) notifying AirTight promptly in writing of such action; (b) giving AirTight sole control of the defense thereof and any related settlement negotiations; and (c) cooperating and, at AirTight's request and expense, assisting in such defense. Customer may also participate in the defense at its own expense. This Section 8.1 states AirTight's entire liability and Customer's sole and exclusive remedy for any third-party claims.

8.2 Cure. If the Hardware or Software becomes, or in AirTight's opinion is likely to become, the subject of an infringement claim that AirTight is required to defend pursuant to Section 8.1, then AirTight may (at its option and expense) either: (a) procure for Customer the right to continue using the Hardware or Software; or (b) replace or modify the Hardware or Software so that it becomes non-infringing. If neither of the foregoing options is reasonably available, then AirTight may: (i) terminate Customer's rights hereunder to use the Software; and (ii) refund a pro-rata portion of any price Customer paid under this EULA, based on the useful life of the Hardware and Software upon return of same to AirTight. Solely for the purpose of calculating any refund payable to Customer under this Section 8.2, the parties agree that the useful life of the Hardware and Software will be deemed to be two (2) years.

8.3 Exclusions. Notwithstanding the foregoing, AirTight will have no obligation under this Section 8 or otherwise with respect to any infringement claim based upon: (a) any use of the Hardware or Software not in accordance with this EULA or the Documentation; (b) any use of the Hardware or Software in combination with other products, Hardware, software, or data not provided or approved by AirTight; (c) any use of any

Release of the Software other than the most current Release made available to Customer; or (d) any modification of the Hardware or Software by any person other than AirTight or its authorized agents. Customer will indemnify AirTight against all liability, damages and costs (including but not limited to reasonable attorneys' fees) resulting from or related to such a claim.

8.4 AirTight products may be capable of operating at frequencies beyond those allowed in your region. You must indemnify, hold harmless, and defend AirTight from and against all Legal and Statutory obligations if you choose to operate the SpectraGuard Enterprise products beyond the allowed frequencies.

9. General

9.1 Notices. All notices, consents and approvals under this EULA (other than orders and order acknowledgments) must be delivered in writing by courier, by facsimile or by certified or registered mail (postage prepaid and return receipt requested) to the other party at the address set forth above, and will be effective upon receipt or three (3) business days after being deposited in the mail as required above, whichever occurs sooner. Either party may change its address by giving notice of the new address to the other party.

9.2 No Third-Party Beneficiaries. No party will be deemed a third-party beneficiary to this EULA.

9.3 Relationship of Parties. The parties hereto are independent contractors. Nothing in this EULA will be deemed to create an agency, employment, partnership, fiduciary or joint venture relationship between the parties.

9.4 Compliance with Export Control Laws. The Software will only be delivered to Customer in the United States and may be subject to export control regulations of the United States and other countries, with which Customer will comply.

9.5 Assignments. Customer may not assign or transfer, by operation of law, merger or otherwise, any of its rights or delegate any of its duties under this EULA (including without limitation, its licenses with respect to the Software) to any third party without AirTight's prior written consent. Any attempted assignment or transfer in violation of the foregoing will be void. AirTight may assign its rights or delegate its obligations under this EULA.

9.6 U.S. Government End Users. The Software and any other software covered under this EULA, are "commercial items" as that term is defined at 48 C.F.R. 2.101, consisting of "commercial computer software" and "commercial computer software documentation" as such terms are used in 48 C.F.R. 12.212. Consistent with 48 C.F.R. 12.212 and 48 C.F.R. 227.7202-1 through 227.7202-4, all U.S. Government end users acquire the Software and any other software and documentation covered under this EULA with only those rights set forth therein.

9.7 Governing Law and Venue. This EULA will be governed by the laws of the State of California. The United Nations Convention on Contracts for the International Sale of Goods does not apply to this EULA. Any action or proceeding arising from or relating to this EULA must be brought exclusively in a federal or state court seated in Santa Clara, California, and in no other venue. Each party irrevocably consents to the personal jurisdiction and venue in, and agrees to service of process issued by, any such court. Notwithstanding the foregoing, AirTight reserves the right to file a suit or action in any court of competent jurisdiction as AirTight deems necessary to protect its intellectual property and proprietary rights.

9.8 Force Majeure. Any delay in or failure of performance by either party under this EULA, other than a failure to pay amounts when due, will not be considered a breach of this EULA and will be excused to the extent caused by any occurrence beyond the reasonable control of such party.

9.9 Remedies. Except as provided in Sections 6, 7 and 8, the parties' rights and remedies under this EULA are cumulative. Customer acknowledges that the Software contains valuable trade secrets and proprietary information of AirTight, that any actual or threatened disclosure or misapplication of such Software will constitute immediate, irreparable harm to AirTight for which monetary damages would be an inadequate remedy, and that injunctive relief is an appropriate remedy for such breach. If any legal action is brought to

End User License Agreement

enforce this EULA, the prevailing party will be entitled to receive its attorneys' fees, court costs, and other collection expenses, in addition to any other relief it may receive.

9.10 Waivers and Modifications. All waivers must be in writing. Any waiver or failure to enforce any provision of this EULA on one occasion will not be deemed a waiver of any other provision or of such provision on any other occasion. This EULA may be amended only by a written document signed by both parties.

9.11 Severability. If any provision of this EULA is adjudicated to be unenforceable, such provision will be changed and interpreted to accomplish the objectives of such provision to the greatest extent possible under applicable law and the remaining provisions will continue in full force and effect.

9.12 Entire EULA. This EULA, the Purchase Order(s) and Services Agreement(s) constitute the entire agreement between the parties regarding the subject hereof and supersedes all prior or contemporaneous EULAs, understandings, and communication, whether written or oral.

9.13 Counterparts. This EULA may be executed in counterparts, each of which will be considered.

The installation must be executed by technical staff.

The Access Point comes with five optional antennas:

Antenna 1-Omnidirectional antenna / Max Gain:12.0 dBi / 2.4 GHz

Antenna 2-Omnidirectional antenna / Max Gain:10.5 dBi / 2.4 GHz

Antenna 3-Omnidirectional antenna / Max Gain:5.2 dBi / 2.4 GHz

Antenna 4-Omnidirectional Panel antenna / Max Gain:3.0 dBi / 2.4 GHz and 5 GHz

Antenna 5-Omnidirectional antenna / Max Gain:6.0 dBi / 5 GHz

Antenna 6-Dual Band Omni antenna / Max Gain:6dBi/2.4GHz / 6.5dBi/5GHz

Operating Band for 3 conditions as below:

1. This AP with 5.2dBi / 10.5dBi / 12.0dBi antenna can be operated on frequency 2400-2483.5MHz & the output power will be set on 20dBm

2. This AP with 3.0dBi antenna can be operated on frequency 2400-2483.5MHz/5150-5350 /5725-5850MHz & the output power will be set on 2400-2483.5MHz : 22dBm , 5150-5350 : 13dBm ,5725-5850MHz : 20dBm

3This AP with 6dBi antenna can be operated on frequency 5150-5350MHz/ 5725-5850MHz & the output power will be set on 5150-5350MHz: 12dBm , 5725-5850 : 20dBm

**5150~5250MHz can't be operated when outdoor use.

4.This AP with Dual Band Omni antenna (Gain:6dBi/2.4GHz / 6.5dBi/5GHz) can be operated on frequency 2400-2483.5MHz/5150-5350/5725-5850MHz & the output power will be set on 2400-2483.5MHz : 22dBm. 5150-5350 : 13dBm, 5725-5850MHz : 20dBm

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Chapter 1 Preface

1.1 Before you begin

Thank you for purchasing SpectraGuard Sensor (also referred to as Sensor). SpectraGuard Sensor works in conjunction with a SpectraGuard Enterprise Server to provide an air-tight cover to your corporate network. It monitors the 802.11 a/b/g medium and provides information to the SpectraGuard Enterprise Server.

Please read the EULA before installing the Sensor. Installing SpectraGuard Sensor constitutes your acceptance of the terms and conditions of the EULA mentioned above in this document. This product cannot be rented or leased—you are the sole owner of the product.

This installation guide provides information about installation, initial configuration, and starting of the SpectraGuard Sensor. This guide contains the following chapters:

- Package Contents: This chapter describes the components of the package that come with this installation guide. These components are required to successfully install SpectraGuard Sensor on the network.
- Overview: This chapter provides an overview of the SpectraGuard Sensor, ports and power connectors.
- Installing SpectraGuard Sensor: This chapter details how to install SpectraGuard Sensor automatically. It also describes how to quickly power up the device and connect it to the network.
- Configuring SpectraGuard Sensor: This chapter describes the configuration of SpectraGuard Sensor using Web Interface (http) and the Command Line Interface (CLI).
- Troubleshooting: This chapter provides troubleshooting tips for SpectraGuard Sensor installation.

1.2 How to get more information

To receive important news on product updates, please visit our website at:
<http://www.airtightnetworks.net>.

You can also reach us by email at support@airtightnetworks.net.

Chapter 2 Package Contents

This chapter gives you a list of the product package contents. Please make sure that the following contents form a part of the SpectraGuard Sensor package. If the package is not complete, please contact AirTight Networks, Inc., or return the package to the vendor or dealer where you purchased it. The contents of the Sensor package are described below:

- SpectraGuard Sensor
- SpectraGuard Sensor Installation Guide
- SpectraGuard Sensor Quick Setup Guide
- Ethernet Cable
- Serial Cable
- Power Cord
- Rubber Holders (optional)

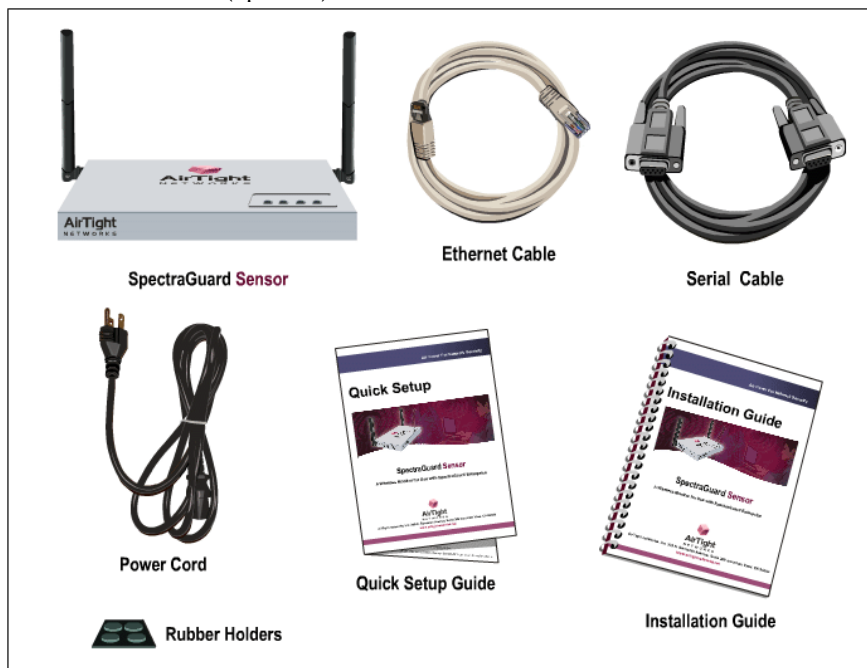


Figure 1 Package Contents

Note: The MAC address for SpectraGuard Sensor is shown on a label at the bottom of the product and the packaging box.

Chapter 3 Overview

This chapter provides an overview of the SpectraGuard Sensor and describes in detail about the following:

- Port and Power Connections
- Status LEDs

3.1 Port and Power Connections

The rear panel of the SpectraGuard Sensor has port and power connectors that enable you to power up the device and connect it to the network or a computer.

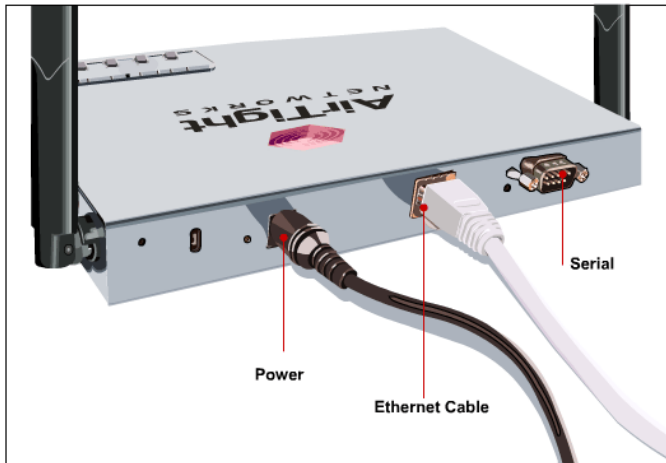


Figure 2 Rear panel of SpectraGuard Sensor showing port and power connections

The SpectraGuard Sensor includes the following ports:

- A Serial port for connecting to serial terminal emulation programs such as Hyper Terminal for Windows or minicom for Linux.
- An Ethernet port for connecting the device to the network.

Table 1 Rear Panel Port Settings

Port	Description	Connector Type	Speed/Protocol
Serial	Enables a serial connection to establish terminal sessions. Used for launching Command	DB-9	Bits per second: 9600 Data Bits: 8

Overview

	Line Interface (CLI) sessions.		Parity: None Stop Bits: 1 Flow Control: None
Ethernet	This enables the device to be connected to the wired LAN through a switch or a hub. This connection allows the SpectraGuard Sensor to communicate with the SpectraGuard Enterprise Server.	RJ-45	10/100 Mbps/Ethernet

Note: The Connection settings mentioned in Table 1 above are the same for Hyper Terminal and minicom.

3.2 Status LEDs

The front panel of the SpectraGuard Sensor has Status LEDs that indicate the working of the SpectraGuard Sensor.

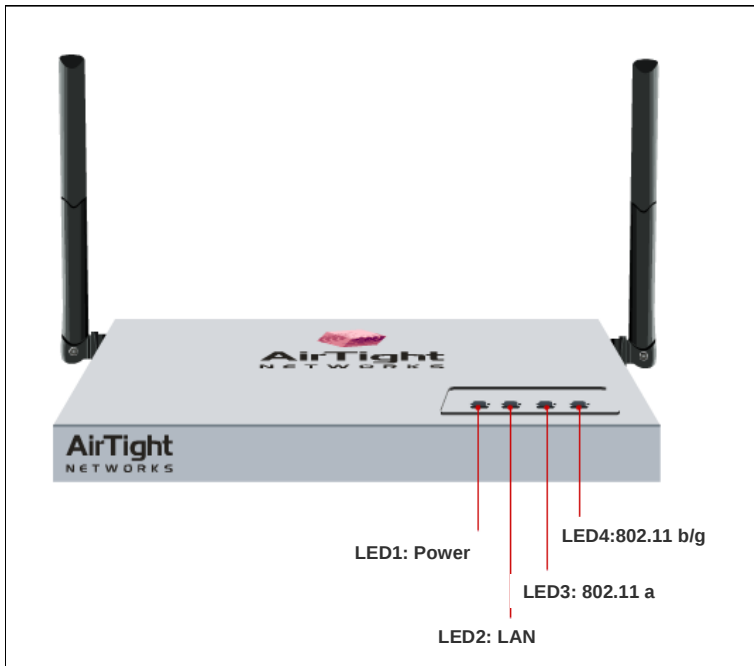


Figure 3 Front panel of SpectraGuard Sensor showing the LEDs

These LEDs are described in Table 2 below:

Table 2 LED details

LED	LED Color	Meaning of LED
LED1 or Power	Solid Green	This indicates that the Sensor is receiving power and is working normally. There are no errors. Check LED2, LED3, and LED4 to determine the status of the device.
	Solid Yellow	This indicates that the Sensor has encountered an error. Check LED2, LED3, and LED4 to determine the error.
	Off	This indicates that the Sensor is not receiving power.
LED2 or LAN	Solid Green	If LED1 is green, it indicates that the Sensor is connected to the Ethernet and is able to connect to the SpectraGuard Enterprise Server. If LED1 is yellow, it indicates that the Sensor is unable to connect to the Ethernet.
	Fast Blinking Green	If LED1 is green, it indicates an invalid state that should not occur. Try restarting the Sensor. If the problem persists, please contact support@airtightnetworks.net . If LED1 is yellow, it indicates that the Sensor did not get a valid IP address from the Dynamic Host Configuration Protocol (DHCP) Server. You can use the Command Line Interface to configure the IP address of the SpectraGuard Sensor.
	Slow Blinking Green	If LED1 is green, it indicates an invalid state that should not occur. If LED1 is yellow, it indicates that the Sensor got a valid IP address from the DHCP Server but was unable to connect to the SpectraGuard Enterprise Server.
	Off	If LED1 is green, it indicates an invalid state that should not occur. Try restarting the Sensor. If the problem persists, please contact support@airtightnetworks.net .
LED3 or 802.11a	Solid Green	If LED1 is green, it indicates that the Sensor is scanning successfully on 802.11a (5 GHz frequency band). If LED1 is yellow, it indicates that the Sensor is experiencing an error on (802.11a/b/g) wireless interfaces.
	Slow Blinking Green	If LED1 is green, it indicates that the Sensor is defending the network against a rogue connection on the 802.11a (5 GHz frequency band). If LED1 is yellow, it indicates an invalid state that should not occur.

Overview

	Off	If LED1 is green, it indicates an invalid state that should not occur. Try restarting the Sensor. If the problem persists, please contact support@airtightnetworks.net .
LED4 or 802.11b/g	Solid Green	If LED1 is green, it indicates that the Sensor is scanning successfully on 802.11b/g (2.4 GHz frequency band). If LED1 is yellow, it indicates that the Sensor is experiencing a software related error. This could be related to the Sensor software that connects to the SpectraGuard Enterprise Server.
	Slow Blinking Green	If LED1 is green, it indicates that the Sensor is defending the network against a rogue connection on 802.11b/g (2.4 GHz frequency band). If LED1 is yellow, it indicates an invalid state that should not occur. Try restarting the Sensor. If the problem persists, please contact support@airtightnetworks.net .
	Off	If LED1 is green, it indicates an invalid state that should not occur. Try restarting the Sensor. If the problem persists, please contact support@airtightnetworks.net .

Chapter 4 Installing SpectraGuard Sensor

Caution : The installation must be executed by technical staff.

SpectraGuard Sensor is the probe that monitors your network and communicates with the SpectraGuard Enterprise Server to guard your corporate network against over-the-air attacks. The Sensor must be plugged to your corporate network to perform the above operations.

Installing and configuring the SpectraGuard Sensor on the network is automatic. This chapter discusses two simple steps to install the SpectraGuard Sensor:

1. Connecting Power
2. Connecting to the Network

Important! To prevent abuse and intrusion by unauthorized personnel, it is extremely important to install the SpectraGuard Sensor such that it is difficult to unplug the device from the network or from the power outlet.

4.1 Connecting Power

SpectraGuard Sensor runs on a 5V DC connection. Use the power adapter provided to power the SpectraGuard Sensor from a 110V~240V 50/60 Hz AC power connection.

To connect the power to SpectraGuard Sensor, perform the following steps:

1. Plug the power cable into the DC power receptacle at the rear of the SpectraGuard Sensor.
2. Plug the other end of the power cable into an 110V~240V 50/60 Hz AC power source.

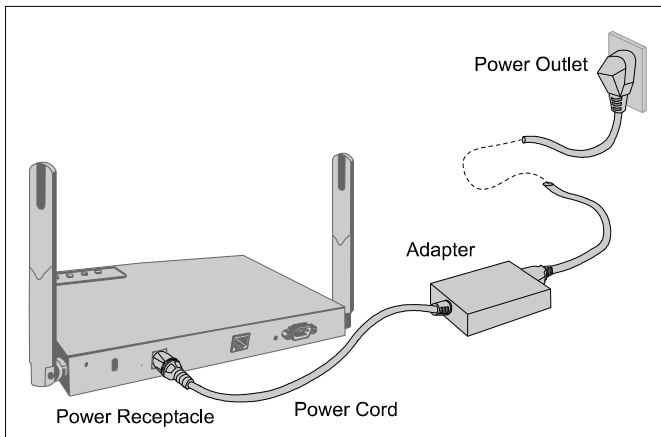


Figure 4 SpectraGuard Sensor showing power connections

Wait for two minutes!

Check the Status LEDs. You will see LED1 turn yellow and LED2 turn green. This means that SpectraGuard Sensor is powered on correctly, and is waiting to be connected to the network.

4.2 Connecting to the Network

Ensure that the SpectraGuard Enterprise Server is already running on your network.

To connect SpectraGuard Sensor to the network, perform the following steps:

1. Connect one end of the Ethernet cable to the Ethernet port at the rear of the SpectraGuard Sensor.
2. Connect the other end of the Ethernet cable to an Ethernet jack that is connected to a hub or a switch.

Recommended! Carefully choose the network segment on which the SpectraGuard Sensor is connected. The SpectraGuard Sensor should be placed on a network segment that can communicate with the SpectraGuard Enterprise Server via multicast.

If you are placing the SpectraGuard Sensor across a router boundary that separates it from the SpectraGuard Enterprise Server, ensure that multicast routing is enabled for the Multicast Group Address 224.0.23.11 on this router. This Multicast Group Address is reserved by IANA for AirTight Networks, Inc. If your system administrator does not allow multicast on routers, you must configure SpectraGuard Sensor manually. Refer to Chapter 5 for details.

Important! If you connect the SpectraGuard Sensor to a network segment where a DHCP Server is running, it will automatically receive an IP address. Otherwise, you will have to configure the IP address of the SpectraGuard Sensor manually.

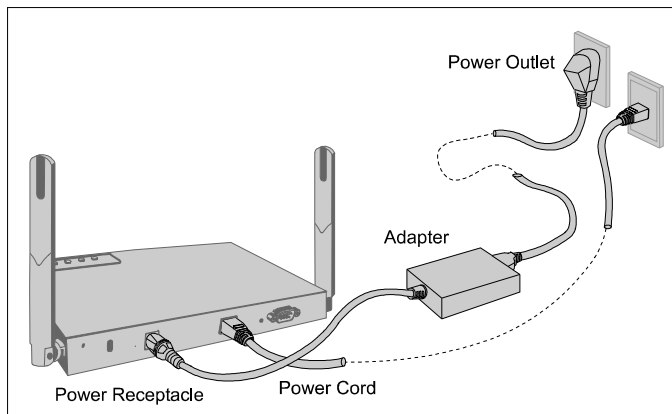


Figure 5 SpectraGuard Sensor showing Network and Power Connections

Wait for two minutes!

Check the Status LEDs. If all LEDs glow green, then the SpectraGuard Sensor is operational and connected to the SpectraGuard Enterprise Server.

The SpectraGuard Sensor is configured and ready to go. Check your SpectraGuard Enterprise Console to ensure that this SpectraGuard Sensor has been detected.

You need not read this installation guide further.

***Note:** If LED1 turns yellow, it means that the automatic installation was not successful and the SpectraGuard Sensor must be configured manually. Refer to Chapter 5 for details.*

***Note:** If LED1 is green, then LED2, LED3, and LED4 must be solid green or blinking green. If this does not happen, there is an error in one of the interfaces. Contact support@airtightnetworks.net for details.*

Chapter 5 Manual Configuration of SpectraGuard Sensor

Important! *If the installation in Chapter 4 was successful, stop! You do not need to configure SpectraGuard Sensor manually.*

In this chapter you will learn how to manually configure SpectraGuard Sensor. The Sensor can be configured in two ways:

- Through the Web Interface (http)
- Through the Command Line Interface (CLI)

You can choose either method to configure the SpectraGuard Sensor. The Web Interface is the easiest way to configure the SpectraGuard Sensor. If you are comfortable using a HyperTerminal or minicom console, you can also use the Command Line Interface method.

5.1 Introduction

You must configure and set up SpectraGuard Sensor manually if LED1 turns yellow during automatic installation. This means that the Sensor was unable to connect to the SpectraGuard Enterprise Server automatically. Manual configuration is required to set up the Sensor to communicate with the SpectraGuard Enterprise Server. Manual configuration is typically required in the following cases:

1. SpectraGuard Sensor did not get an IP address automatically from the DHCP Server.
2. SpectraGuard Sensor is placed on a network segment that is separated from SpectraGuard Enterprise Server by a firewall. You must first open port 3851 for User Datagram Protocol (UDP) and Transport Control Protocol (TCP) bidirectional traffic on that firewall. This port number is assigned to AirTight Networks.
3. SpectraGuard Sensor is separated from SpectraGuard Enterprise Server by a router, a Network Address Translation (NAT) device or a firewall that does not have multicast enabled.

5.2 Manual Configuration of SpectraGuard Sensor

The following steps are used to configure SpectraGuard Sensor:

1. Log in
2. Change Password Settings
3. Change Network Settings

4. Change Discovery Settings

Manual configuration can be done through a Web Interface (http) or Command Line Interface (CLI).

5.3 Configuring SpectraGuard Sensor through Web Interface (http)

Configuration using Web Interface is done using the network connection or using the crossover cable connected between your machine and the Sensor.

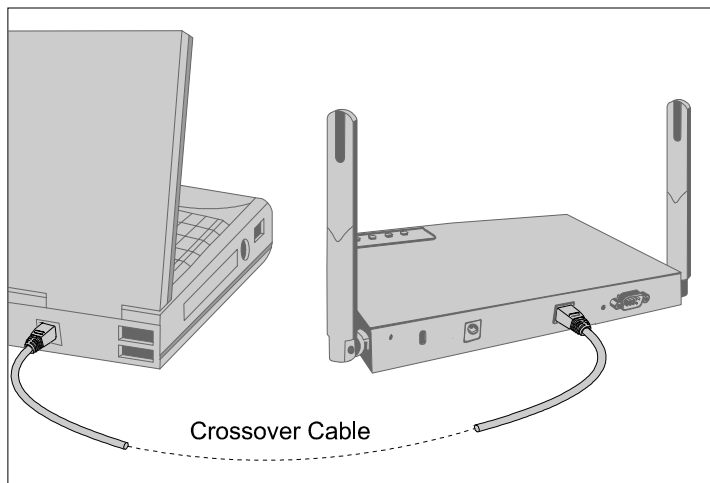


Figure 6 Connecting to SpectraGuard Sensor using the Crossover Cable

Important! For Web configuration using the crossover cable, make sure that your machine is not running a DHCP Server. You can figure this out by looking at the SpectraGuard Sensor LEDs. If LED1 is yellow and LED2 is Fast Blinking Green, it means that Sensor did not get an IP address from the DHCP Server. In that case, the SpectraGuard Sensor network settings would default to the following:

IP Address: 192.168.1.245

Network Mask: 255.255.255.0

The steps to configure SpectraGuard Sensor using Web Interface are explained in detail below.

5.3.1 Step1: Log into the Web Interface

You have to log into the Web Interface to configure the SpectraGuard Sensor.



Figure 7 Login Screen

To log in, you have to perform the following steps:

1. Set your laptop as per the same subnet settings and a different IP address (ignore if already done).
2. Type the correct IP address obtained from the DHCP Server in the Web Interface, for Web configuration using the Ethernet cable. Type the address 192.168.1.245 in the Web Interface, for Web (http) configuration using the crossover cable.
3. Log in using the user name '*config*' and the password '*config*', and click **OK**, as shown in Figure 7 above.

5.3.2 Step 2: Change Password Settings

For security reasons, you should immediately change the password after you log into the SpectraGuard Sensor Console.

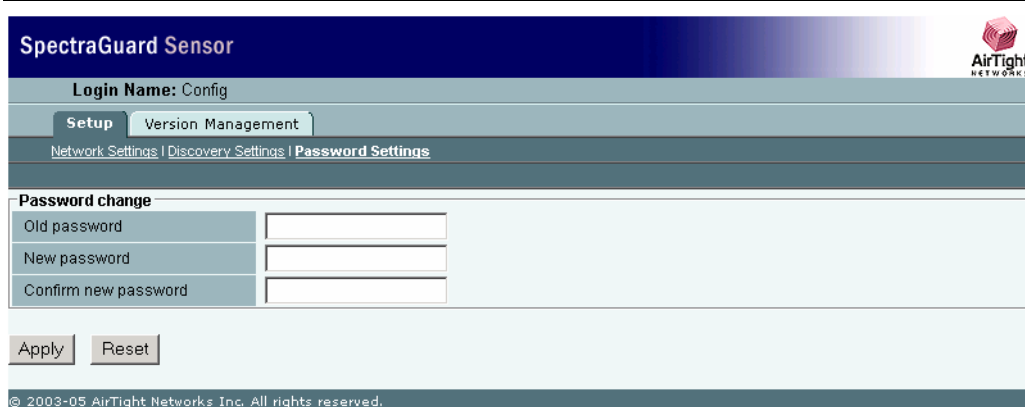


Figure 8 Password Settings Screen

The Password Settings Screen as shown in Figure 8 above appears by default and allows the user to change the password. Enter the old password and the new password and click **Apply**.

***Note:** If you do not change the password the first time you log in, then the Password Settings Screen appears every time you log into SpectraGuard Sensor. Once you change the password this screen does not reappear.*

You will be asked to reboot SpectraGuard Sensor for the new password settings to take effect.

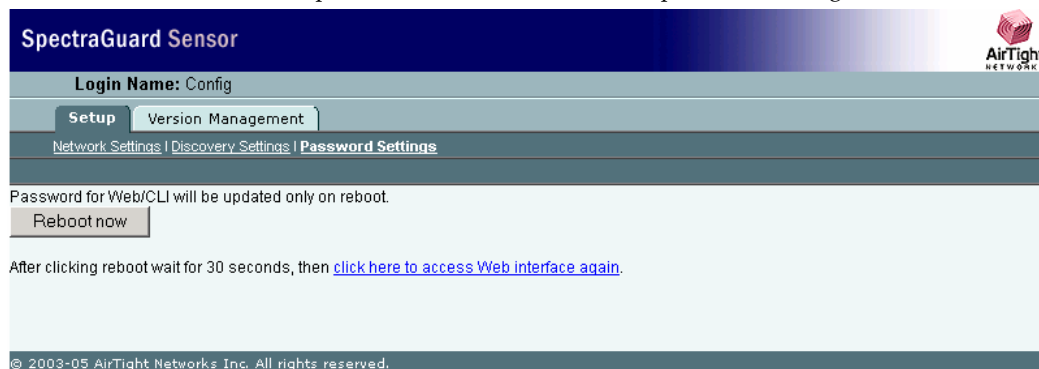


Figure 9 Reboot Screen

***Note:** A Reboot screen as shown in Figure 9 above appears once you have changed the password for the first time or every time you change the password. Click 'Reboot now' to reboot SpectraGuard Sensor.*

5.3.3 Step 3: Change Network Settings

Network Settings are used to set up the SpectraGuard Sensor IP address and Route Settings. These

settings are required so that the SpectraGuard Sensor can communicate with the SpectraGuard Enterprise Server.

SpectraGuard Sensor 

Login Name: Config

Setup Version Management

[Network Settings](#) | [Discovery Settings](#) | [Password Settings](#)

MAC Settings

Ethernet MAC Address 00:11:74:20:10:C4

IP Address Settings

Get IP over DHCP ☒

IP Address 192.168.3.58

Subnet Mask 255.255.255.0

Gateway IP Address

Route Settings

Add a Network ☐

Network ID

Subnet Mask

Gateway IP Address

Clicking "Apply" will apply the changes and reboot this SpectraGuard Sensor. You will not get a confirmation message. The current HTML configuration pages will no longer be available.

Note: To reconnect after reboot, use the static IP address that you assigned to this SpectraGuard Sensor. If you chose DHCP, connect this SpectraGuard Sensor to the desired network. The SpectraGuard Sensor will automatically receive an IP address from the DHCP server on that network.

Figure 10 Network Settings Screen

There are three main sections under the Network Settings tab.

- MAC Settings
- IP Address Settings
- Route Settings

MAC Settings

Ethernet MAC address shows the Media Access Control (MAC) address of the SpectraGuard Sensor Ethernet Interface. This is a unique address assigned to every network interface. This field is provided for information purposes only.

IP Address Settings

Change the fields mentioned below to modify the IP Address Settings:

Get IP over DHCP: This field is checked by default. This enables SpectraGuard Sensor to get an IP address automatically from a DHCP Server. If this field is unchecked, you can set the IP address manually.

IP Address: This field can be set only if the *Get IP over DHCP* field is unchecked. This field sets the IP address of the SpectraGuard Sensor. The IP address should belong to the network segment on which this SpectraGuard Sensor is to be connected.

Subnet Mask: This field can be set only if the *Get IP over DHCP* field is unchecked. This field represents the mask of the network segment to which SpectraGuard Sensor will be connected.

Gateway IP Address: This field can be set only if the *Get IP over DHCP* field is unchecked. When Ethernet traffic from the subnet is forwarded to another network, it is sent through the Gateway. Enter the Gateway IP Address for the subnet on which this SpectraGuard Sensor is to be connected.

Note: You need to change the IP address only if you do not have a DHCP Server to assign an IP address automatically.

Route Settings

Normally, you do not need to specify the route settings and these fields can be left blank. You should specify the route settings only if the default gateway provided by DHCP is not the gateway to the network segment where the SpectraGuard Enterprise Server is installed.

Add a Network: Checking this field allows you to add a network route to communicate with SpectraGuard Enterprise Server.

Network ID: This field specifies the network segment ID where the SpectraGuard Enterprise Server is connected.

Subnet Mask: This field represents the mask of the network segment where the SpectraGuard Enterprise Server is connected.

Gateway IP Address: This field is the IP address of the gateway to the network segment where the SpectraGuard Enterprise Server is connected.

Note: If the “Add a Network” checkbox is not checked, then the Network ID, Subnet Mask, and Gateway IP Address are disabled.

5.3.4 Step 4: Change Discovery Settings

Discovery Settings set up the discovery of the SpectraGuard Enterprise Server by the SpectraGuard Sensor. These settings must be manually configured only if SpectraGuard Sensor is unable to locate the SpectraGuard Enterprise Server.

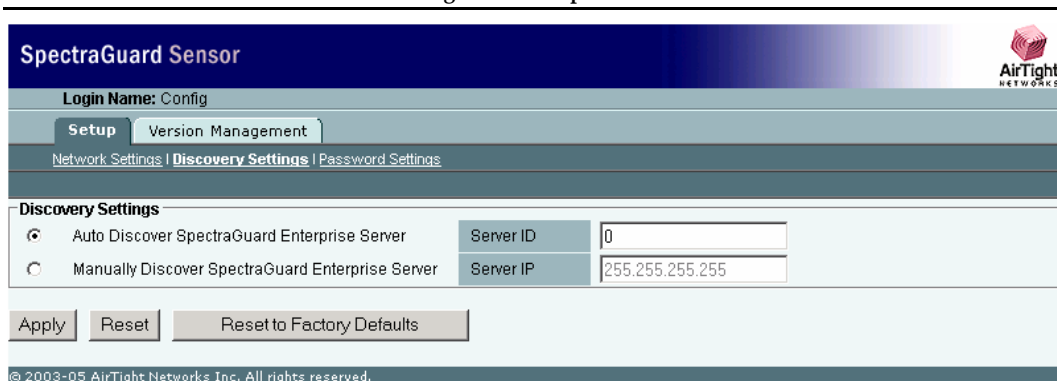


Figure 11 Discovery Settings Screen

There are two main sections under Discovery Settings:

- Auto Discover SpectraGuard Enterprise Server
- Manually Discover SpectraGuard Enterprise Server

Auto Discover SpectraGuard Enterprise Server

You can set up the SpectraGuard Sensor to automatically discover and connect to the SpectraGuard Enterprise Server. If you have multiple SpectraGuard Enterprise Servers on your network, each SpectraGuard Enterprise Server will have a different Server ID. You must specify the Server ID of the SpectraGuard Enterprise Server that this SpectraGuard Sensor should connect to.

Server ID: This is the SpectraGuard Enterprise Server ID to which the SpectraGuard Sensor should connect. By default the Server ID is 0, which means that the connection will be attempted to any SpectraGuard Enterprise Server that is available. This field needs to be changed only if there are multiple SpectraGuard Enterprise Servers in the network.

Important! The “Server ID” setting in the SpectraGuard Sensor Console should be left as '0' if you want SpectraGuard Sensor to auto detect the SpectraGuard Enterprise Server. In case you set the Server ID manually, it must be set to the Server ID of the SpectraGuard Enterprise Server. If unsure, do not change this field.

Manually Discover SpectraGuard Enterprise Server

You can set up the SpectraGuard Sensor to explicitly discover and connect to the SpectraGuard Enterprise Server. You must specify the Ethernet IP address of the SpectraGuard Enterprise Server.

Server IP: This is the IP address of the SpectraGuard Enterprise Server to which the SpectraGuard Sensor should connect. By default the Server IP address is 255.255.255.255.

Clicking **Apply** saves the changes.

Clicking **Reset** resets the parameters to their previous values without applying the changes.

Clicking **Reset to Factory Defaults** resets the configuration parameters to the factory default settings. In this case, all the configuration settings, including the password settings will be restored to factory defaults. Click this button, only when you want SpectraGuard Sensor to behave like a brand new SpectraGuard Sensor.

5.4 Configuring SpectraGuard Sensor through Command Line Interface (CLI)

You can also configure the SpectraGuard Sensor using the Command Line Interface. To use the Command Line Interface connect a Serial (RS-232) cable between your computer and the SpectraGuard Sensor. The Command Line Interface supports a pre-defined set of commands used for the SpectraGuard Sensor configuration.

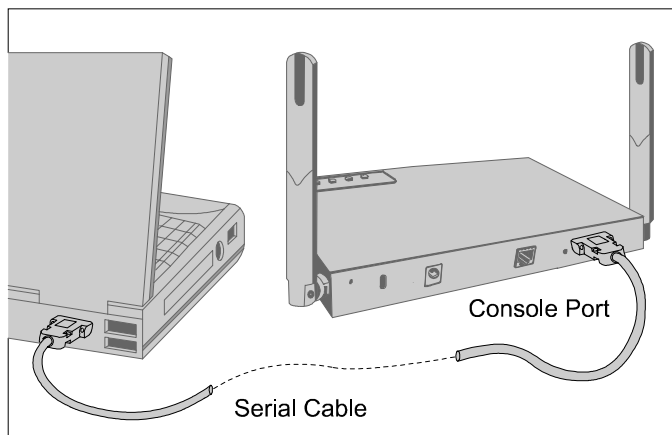


Figure 12 Connecting to SpectraGuard Sensor using the Serial Cable

Note: It is recommended that you plug in the Serial Cable first and then start configuring the SpectraGuard Sensor through the Command Line Interface. A Serial Cable is not provided in the SpectraGuard Sensor package.

The following steps are used for configuring the SpectraGuard Sensor through the Command Line Interface:

5.4.1 Step 1: Invoking the Command Line Interface

To start configuration of the SpectraGuard Sensor, you need to invoke the Command Line Interface first. You need to follow the steps described below to invoke the Command Line Interface.

1. Opening HyperTerminal

To start HyperTerminal, click *Start* → *Programs* → *Accessories* → *Communications* → *HyperTerminal* as shown in Figure 13 below.

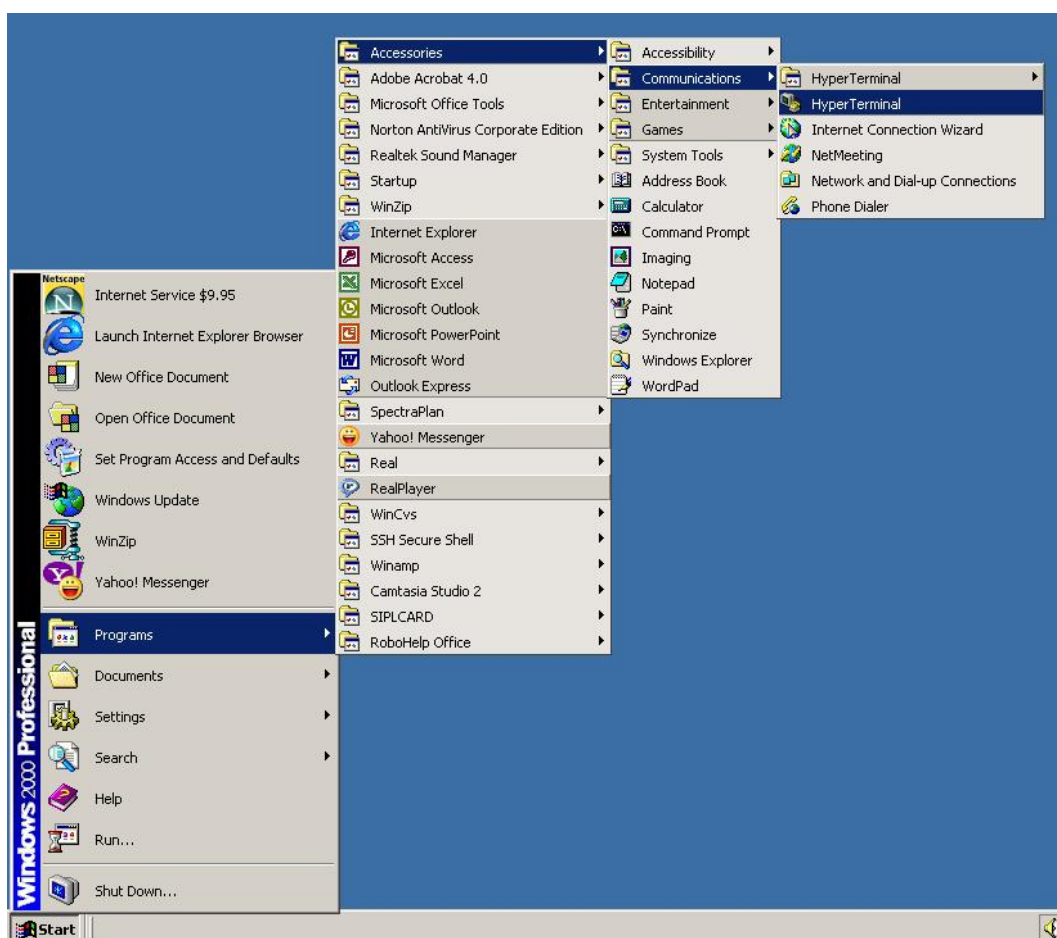


Figure 13 Opening HyperTerminal

***Note:** If you are using a Linux laptop, you can use minicom to connect to the Command Line Interface (CLI).*

2. Defining a New Connection

Once HyperTerminal opens, Figure 14 will appear by default. You have to name the new connection, so that your connection is recognized. You can also select an icon to identify your new connection.



Figure 14 New HyperTerminal Connection

Type the desired name for the connection. For example, '*SpectraGuard Sensor*' under the Name field and click **OK**.

3. Adding Connection Details

Select the appropriate serial port from the *Connect using* drop-down list and click **OK**.



Figure 15 HyperTerminal Connection Details

Note: The name of the serial port will change as per the settings of your machine.

4. Editing Port Settings

Enter the following values under the COM Properties window to ensure proper transmission.

- Bits per second: 9600
- Data bits: 8
- Parity: None
- Stop bits: 1
- Flow control: None

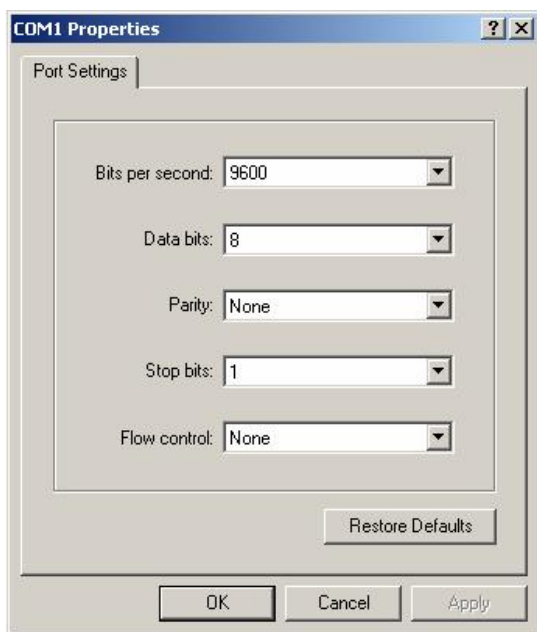


Figure 16 HyperTerminal Port Settings

After selecting these settings, click **OK**. The Command Line Interface is now ready.

5.4.2 Step 2: Log into the Command Line Interface and change password

You need to log into the Command Line Interface to start configuring the SpectraGuard Sensor. The user name for login is *config* as shown in the Figure 17 below.

Recommended! For security reasons, it is recommended that you change the password immediately after logging in to SpectraGuard Sensor.

The **passwd** command changes the password of the default user '*config*'. The default password is '*config*'.

Type the following commands (shown in bold) to change the Password Settings.

```
$ login: config
Password: passwd
Changing password
Password changed.
*Please reboot sensor for changes to take effect*
```

The following screen is an example from a live session.

```
#
(none) login: config
Password:
[1]$ passwd
Changing password
Password changed.

*Please reboot sensor for changes to take effect*
```

Figure 17 Changing password using the passwd command

Note: A Reboot message appears, once you have changed the password for the first time. SpectraGuard Sensor asks you to reboot every time you change the password.

5.4.3 Step 3: Change Network Settings

Network settings set up the SpectraGuard Sensor IP address and Route Settings. These settings are required so that SpectraGuard Sensor can communicate with the SpectraGuard Enterprise Server.

Commands to change network settings

Type the following commands to change the network settings.

- *setdhcpip*—This command allows you to get a DHCP assigned address for the Sensor.
- *setstaticip*—This command allows you to assign a static IP address for the Sensor.

Note: If you set the DHCP IP settings using the *setdhcpip* command, you do not need to use the *setstaticip* command.

The above commands are explained in detail below.

setdhcpip

This command configures the SpectraGuard Sensor to automatically get an IP address from the DHCP Server.

Type the following command (shown in bold) to change the Network Settings:

\$ setdhcpip

Stopping SpectraGuard Sensor...

Getting IP over dhcp...

Enter Route Settings or press Enter to skip settings routes

Route Settings:

Network ID:

Applying Changes...

Ethernet MAC Address = 00:11:74:20:10:C4

Boot IP Protocol = dhcp

IP=192.168.3.58 Mask=255.255.255.0 Gateway=

Note: If IP address assignment via DHCP fails, the default values assigned are as follows:

IP address = 192.168.3.58

Net Mask = 255.255.255.0

If DHCP fails, the Sensor software doesn't begin execution.

The following screen is an example from a live session.

```
[1]$ setdhcpip
Stopping SpectraGuard Sensor...
Getting IP over dhcp...

Enter Route Settings or press Enter to skip setting routes
Route Settings:
Network ID :

Applying Changes...

Ethernet MAC Address = 00:11:74:20:10:C4
Boot IP Protocol = dhcp
IP=192.168.3.58 Mask=255.255.255.0 Gateway=
```

Figure 18 Changing network settings using the setdhcpip command

setstaticip

This command allows you to assign a static IP address for the Sensor and prompts you for the following inputs:

- A valid IP address—The IP address should be compatible with the network segment on which this SpectraGuard Sensor is to be connected.
- The corresponding subnet mask—This represents the mask of the network segment to which the SpectraGuard Sensor will be connected.

- The default gateway—When Ethernet traffic from the subnet is forwarded to another network, it is sent through the Gateway. Enter the Gateway IP Address for the subnet on which this SpectraGuard Sensor is to be connected.

Route Settings—Normally, you do not need to specify the route settings. You should specify the route settings only if the default gateway provided by the DHCP Server is not the gateway to the network segment where SpectraGuard Enterprise Server is installed.

- Network ID—This specifies the network segment ID, where the SpectraGuard Enterprise Server is connected. (E.g.: 192.168.5.0)
- Subnet Mask—This represents the mask of the network segment where the SpectraGuard Enterprise Server is connected. (E.g.: 255.255.255.0)
- Gateway—This is the IP address of the gateway to the network segment where the SpectraGuard Enterprise Server is connected. (E.g.: 192.168.3.250)

Note: You can retain the default values for the above inputs by pressing **Enter**.

Type the following commands (shown in bold) to change the IP and Route Settings for the SpectraGuard Sensor.

```
$ setstaticip
Current Settings are:
IP=192.168.3.33 Mask=255.255.255.0 Gateway=192.168.3.254
Enter new addresses or Enter to leave unchanged
IP:
192.168.3.33
Setting IP to 192.168.3.33
Mask:
255.255.255.0
Setting Mask to 255.255.255.0
Gateway:
192.168.3.254
Setting Gateway to 192.168.3.254

Enter Route Settings or press Enter to skip setting routes
Route Settings:
Network ID:

Applying Changes...
Stopping SpectraGuard Sensor...
Ethernet MAC Address = 00:11:74:20:10: C4
Boot IP Protocol = static
IP=192.168.3.33 Mask=255.255.255.0 Gateway=192.168.3.254
Starting SpectraGuard Sensor...
```

The following screen is an example from a live session.

```

[3]# [4]# [5]# setstaticip
Current Settings are:
IP=192.168.3.33 Mask=255.255.255.0 Gateway=192.168.3.254
Enter new addresses or Enter to leave unchanged
IP :
192.168.3.33
Setting IP to 192.168.3.33
Mask :
255.255.255.0
Setting Mask to 255.255.255.0
Gateway :
192.168.3.254
Setting Gateway to 192.168.3.254

Enter Route Settings or press Enter to skip setting routes
Route Settings:
Network ID :

Applying changes...
Stopping SpectraGuard Sensor...
Ethernet MAC Address = 00:11:74:20:10:C4
Boot IP Protocol = static
IP=192.168.3.33 Mask=255.255.255.0 Gateway=192.168.3.254
Starting SpectraGuard Sensor...

```

Figure 19 Changing network settings using the setstaticip command

5.4.4 Step 4: Change Discovery Settings

Discovery Settings set up the discovery of the SpectraGuard Enterprise Server by the SpectraGuard Sensor. These settings must be manually configured only if SpectraGuard Sensor is unable to locate the SpectraGuard Enterprise Server.

Commands to change Discovery Settings

Type the following commands to change the Discovery Settings.

editconfig

This command allows the various SpectraGuard Sensor configuration parameters to be viewed and changed. Pressing *Enter* leaves the previous values unchanged.

Type the commands (shown in bold) to change the Discovery Settings:

```

editconfig
Enter the modified fields or press Enter to leave unchanged

[Discovery Settings]
    Auto Discovery = y
    [y/n] : y
    Server ID = 34
    (0-65535) :
Stopping SpectraGuard Sensor...
Starting SpectraGuard Sensor...

```

The following screen is an example from a live session.

```
[5]$ editconfig
Enter the modified fields or press Enter to leave unchanged

[Discovery Settings]
    Auto Discovery =  y
    (y/n) : y
    Server ID = 34
    (0-65535) :
Stopping SpectraGuard Sensor...
Starting SpectraGuard Sensor...
```

Figure 20 Changing Discovery Settings using the editconfig command

5.4.5 Other Commands

The following commands are optional and can be used to check the working of the SpectraGuard Sensor. These commands are provided for information only and it is not necessary to use these commands.

View the IP settings

viewip—This command displays the current IP address, subnet mask, and the Gateway IP Address assigned to the Ethernet interface of the SpectraGuard Sensor. It also displays the route settings if specified.

To view the IP settings, type the command (shown in bold) below in the CLI.

```
$ viewip
Current IP settings are:
IP=192.168.3.58 Mask=255.255.255.0 Gateway=192.168.3.254
```

The following screen is an example from a live session.

```
[6]$ viewip
Current IP settings are:
IP=192.168.3.58 Mask=255.255.255.0 Gateway=192.168.3.254
```

Figure 21 Viewing network settings using the viewip command

Modify the Configuration Settings

viewconfig—This command shows the current configuration of the Sensor, as shown in Figure 22 below. The various configuration parameters are as follows:

auto_discovery—This parameter signifies whether multicasting is enabled or not.

If Allowed="y"(Default) then multicast is enabled.

If Allowed="n" then multicast is disabled and the SpectraGuard Sensor connects to the SpectraGuard Enterprise Server using unicast.

server_ip—This parameter signifies the IP address of the SpectraGuard Enterprise Server to which the SpectraGuard Sensor connects. This is valid and is displayed only if *auto_discovery="n"*, i.e., multicasting is disabled.

Default IP Address = 255.255.255.255

server_id—This parameter signifies the Server ID of the SpectraGuard Enterprise Server to which the SpectraGuard Sensor connects. This is valid and will be displayed only if *auto_discovery="y"*, i.e., multicasting is enabled.

Default Server ID = 0

Note: Server ID "0" implies that connection will be attempted to any SpectraGuard Enterprise Server.

Type the following command (shown in bold) to view the current configuration settings:

```
viewconfig
Current Configuration:

[Discovery Settings]
  Auto Discovery = y
  Server ID = 34
```

The following screen is an example from a live session.

```
[3]$ [4]$ viewconfig
Current Configuration:

[Discovery Settings]
  Auto Discovery =  y
  Server ID = 34
```

Figure 22 Viewing the current configuration settings using the viewconfig command

resetfactory—This command resets the Sensor configuration to the original factory settings.

Note: Please do not press the arrow keys or backspace keys in the Command Line Interface as they do not work here. In case these keys are accidentally pressed, keep pressing **Enter** till the command finishes its execution. Then execute the command once again.

Type the following commands (shown in bold) to reset to factory default settings:

```
resetfactory
This will reset the configuration files and password to factory defaults
and reboot SpectraGuard Sensor
Do you want to continue [Y/N]?
Y
```

The following screen is an example from a live session.

```
[2]$ resetfactory
This will reset the configuration files and password to factory defaults and reboot SpectraGuard Sensor
Do you want to continue [Y/N]?
Y
```

Figure 23 Resetting to factory default settings using the `resetfactory` command

Viewing the status of SpectraGuard Sensor

status—This command shows the current status of the Sensor. The two possible states are "Not Running" or "Running".

```
[2]$ status
Status : RUNNING
```

Figure 24 `status` command

Viewing the status of the SpectraGuard Sensor software

ver—This command displays the version of the software running on the Sensor.

```
[5]$ ver
Existing Versions
0.9.9 Running
```

Figure 25 `ver` command

Getting the host information

ping—This command invokes the common "ping" program which checks whether a host is reachable or not. It exits after sending and receiving four packets.

Important! Don't use Control + C, as it causes the shell to exit.

```
[9]$ ping 192.168.3.85
PING 192.168.3.85 (192.168.3.85): 56 data bytes
64 bytes from 192.168.3.85: icmp_seq=0 ttl=64 time=0.4 ms
64 bytes from 192.168.3.85: icmp_seq=1 ttl=64 time=0.5 ms
64 bytes from 192.168.3.85: icmp_seq=2 ttl=64 time=0.5 ms
64 bytes from 192.168.3.85: icmp_seq=3 ttl=64 time=0.5 ms

--- 192.168.3.85 ping statistics ---
4 packets transmitted, 4 packets received, 0% packet loss
round-trip min/avg/max = 0.4/0.4/0.5 ms
```

Figure 26 `ping` command

Restarting the Sensor

sensord_restart—This command restarts the Sensor i.e. causes the SpectraGuard Sensor software to reinitialize. You do not need to reconfigure Sensor after the restart.

```
[2]$ sensord_restart  
Restarting SpectraGuard Sensor...
```

Figure 27 `sensord_restart` command

Rebooting the Sensor

reboot—This command causes the Sensor to physically reboot. You do not need to reconfigure SpectraGuard Sensor after the reboot.

Exiting the shell

exit—This command causes the shell to exit and the login screen to appear.

```
[17]$ exit
```

Figure 28 `exit` command

Viewing the available commands

help—This command displays the list of available commands.

```
[16]$ help  
  
Supported Commands:  
passwd  
status  
viewconfig  
editconfig  
ver  
viewip  
setstaticip  
setdhcpip  
ping  
sensord_restart  
reboot  
resetfactory  
exit  
help
```

Figure 29 `help` command

To summarize, the Web (http) Interface is similar to the Command Line Interface in its capabilities. You can choose either interface to configure SpectraGuard Sensor.

Chapter 6 Troubleshooting

Symptoms	Diagnosis	Solution
LED1: Yellow LED2: Fast Blinking Green	Not getting a DHCP address.	The DHCP Server is down. Either bring up the DHCP Server or set a static IP address via the Web (http) or Command Line Interface.
LED1: Yellow LED2: Slow Blinking Green	Unable to connect to the SpectraGuard Enterprise Server.	- Ensure that multicasting is enabled on your router. If you don't want to do that, connect on unicast by setting <code>auto_discovery="n"</code> and specify the IP address of the SpectraGuard Enterprise Server. - The other reason could be that SpectraGuard Enterprise Server with the specified Server ID is down or the Server ID is different from what is configured. - Make sure you use only factory crimped Ethernet cables with SpectraGuard Sensor or the cable supplied in the package. - SpectraGuard Enterprise Server is possibly on a different subnet that the default gateway doesn't recognize. In such a case, you can specify an alternate route on which the SpectraGuard Enterprise Server resides via the Web (http) or Command Line Interface. If this doesn't work, then the SpectraGuard Enterprise Server with the specified IP or ID is probably down or the Server ID is different from what is configured.
LED1: Yellow LED2: Green	The Ethernet cable is loose. It is probably disconnected from the network.	Reconnect the Ethernet cable to the network.
LED1: Yellow LED3: Green	An error on the 802.11 interface has occurred.	Contact support@airtightnetworks.net for more details.
LED1: Yellow LED4: Green	A fatal Software error has occurred.	Contact support@airtightnetworks.net for more details.