

Enterasys® Wireless

Access Points

Installation Guide

WS-AP3710i

WS-AP3710e



Electrical Hazard: Only qualified personnel should perform installation procedures.

Riesgo Electrico: Solamente personal calificado debe realizar procedimientos de instalacion.

Elektrischer Gefahrenhinweis: Installationen sollten nur durch ausgebildetes und qualifiziertes Personal vorgenommen werden.

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金属部件 (Metal Parts)	×	○	○	○	○	○
电路模块 (Circuit Modules)	×	○	○	○	○	○
电缆及电缆组件 (Cables & Cable Assemblies)	×	○	○	○	○	○
塑料和聚合物部件 (Plastic and Polymeric parts)	○	○	○	○	○	○
电路开关 (Circuit Breakers)	○	○	○	○	○	○

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About This Guide

The guide describes how to mount and connect cables to the Enterasys Wireless AP3710 access points (WS-AP3710i and WS-AP3710e). In addition, this guide provides information on the product certifications and national approvals for the AP3710 access points.



Note: This guide does not provide information on configuration of the access points. For information on how to configure the access points, see the *Enterasys Wireless Convergence Software User Guide*.

Who Should Use This Guide



Electrical Hazard: Only qualified personnel should install or service this unit.

Riesgo Electrico: Nada mas personal capacitado debe de instalar o darle servicio a esta unida.

Elektrischer Gefahrenhinweis: Installationen oder Servicearbeiten sollten nur durch ausgebildetes und qualifiziertes Personal vorgenommen werden.

This product should be installed and serviced by a qualified licensed technician, electrician, or electrical maintenance person familiar with its operation and the hazards involved. Proper installation, which includes wiring, mounting, fusing or other over current protection and grounding, can reduce the chance of electric shocks, fires, or explosion in this product or products used within this product.

How to Use This Guide

Read through this guide completely to familiarize yourself with its contents and to gain an understanding of the features and capabilities of the AP3710 access points. A general working knowledge of data communications networks is helpful when setting up this product.

This preface provides an overview of this guide, defines the conventions used in this document, and instructs how to obtain technical support from Enterasys Networks. To locate information about various subjects in this guide, refer to the following table.

For...	Refer to...
An overview of the AP3710 features.	Chapter 1, Introduction
Instructions to mount the AP3710, connect cables, and connect power. Instructions are also included to mount and connect the optional Power Supply.	Chapter 2, Installation
Specifications, environmental requirements, and physical properties of the AP3710.	Appendix A, Specifications
Regulatory certifications and national approvals.	Appendix B, Regulatory Information

Related Documents





The following document can be obtained from the World Wide Web in Adobe Acrobat Portable Document Format (PDF) at the following location:

<https://extranet.enterasys.com/downloads/>

- *Enterasys Wireless Convergence Software User Guide*

Typographical Conventions

The following typographical conventions and icons are used in this document.

blue type	Indicates a hypertext link. When reading this document online, click the text in blue to go to the referenced figure, table, or section.
Lowercase x	Indicates the general use of an alphanumeric character (for example, AP37xx, the x's indicate a combination of numbers or letters).
	Note: Calls the reader's attention to any item of information that may be of special importance.
	Caution: Contains information essential to avoid damage to the equipment. Precaución: Contiene información esencial para prevenir dañar el equipo. Achtung: Verweist auf wichtige Informationen zum Schutz gegen Beschädigungen.
	Warning: Warns against an action that could result in personal injury or death. Advertencia: Advierte contra una acción que pudiera resultar en lesión corporal o la muerte. Warnhinweis: Warnung vor Handlungen, die zu Verletzung von Personen oder gar Todesfällen führen können!
	Electrical Hazard: Warns against an action that could result in personal injury or death. Riesgo Electrico: Advierte contra una acción que pudiera resultar en lesión corporal o la muerte debido a un riesgo eléctrico. Elektrischer Gefahrenhinweis: Warnung vor sämtlichen Handlungen, die zu Verletzung von Personen oder Todesfällen – hervorgerufen durch elektrische Spannung – führen können!

Getting Help

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World Wide Web	www.enterasys.com/support/
Phone	1-800-872-8440 (toll-free in U.S. and Canada) or 1-603-952-5000 For the Enterasys Networks Support toll-free number in your country: www.enterasys.com/support/
Internet mail	support@enterasys.com To expedite your message, please type [Wireless] in the subject line.

Before contacting Enterasys Networks for technical support, have the following data ready:

- Your Enterasys Networks service contract number
- A description of the failure
- A description of any action(s) already taken to resolve the problem (for example, changing mode switches or rebooting the unit)
- The serial and revision numbers of all involved Enterasys Networks products in the network
- A description of your network environment (such as layout, cable type, other relevant environmental information)
- Network load and frame size at the time of trouble (if known)
- The device history (for example, if you have returned the device before, or if this is a recurring problem)
- Any previous Return Material Authorization (RMA) numbers

Introduction

This installation guide provides an overview and installation instructions for the Enterasys Wireless Access Points WS-AP3710 i and WS-AP3710 e.

For information about...	Refer to page...
About the WS-AP3710	1-1
WS-AP3710 Overview	1-2
Common Architectural Features	1-5

About the WS-AP3710

The WS-AP3710 access points are a cost-effective solution for extending your wireless LAN around indoor locations. They interoperate fully with the Enterasys wireless LAN, including support for Enterasys wireless VoWLAN, branch office mode, availability and mobility features.

The WS-AP3710 i and WS-AP3710 e have the following features:

- Both operate in 802.11n mode, and also support 802.11a/802.11g and 802.11b standard legacy devices.
- Both support two MIMO 3x3 (up to three 802.11n spatial streams).
- They provide two single band radios for dual-band, concurrent operation, optimized for indoor antenna coverage:
 - 5GHz (Radio 1) in any of the following modes: IEEE802.11 a/b/g and/or n
 - 2.4GHz (Radio 2) in any of the following modes: IEEE802.11 a/b/g and/or n
- They are enclosed in a rectangular, compact case.
- Both models include a mounting bracket for mounting them to walls and drop ceilings. (For mounting on drop ceilings, an optional T-bar rail clamp accessory is needed.)
- They provide 40MHz Bandwidth at 2.4/5GHz operation (Channel Bonding).
- They must be powered directly through the LAN using Power over Ethernet (PoE).



Note: The WS-AP3710 comes in two models: the WS-AP3710i has 6 internal single-band antennas while the WS-AP3710e has 6 external RSMA connectors for connecting external antennas. Within this document, any reference to WS-AP3710 applies to both models.

WS-AP3710 Overview

Figure 1-1 on page 1-2 shows the front view of the WS-AP3710 i and Figure 1-2 on page 1-3 shows the front view of the WS-AP3710 e. Both figures also show the location of the LAN port and console port.

Figure 1-3 on page 1-4 shows the back view of the WS-AP3710 i. Although the figure shows the WS-AP3710 e model, the back panel is the same for both models.

Figure 1-4 on page 1-5 illustrates the WS-AP3710 i LEDs.

Figure 1-1 Enterasys Wireless AP3710i Front View

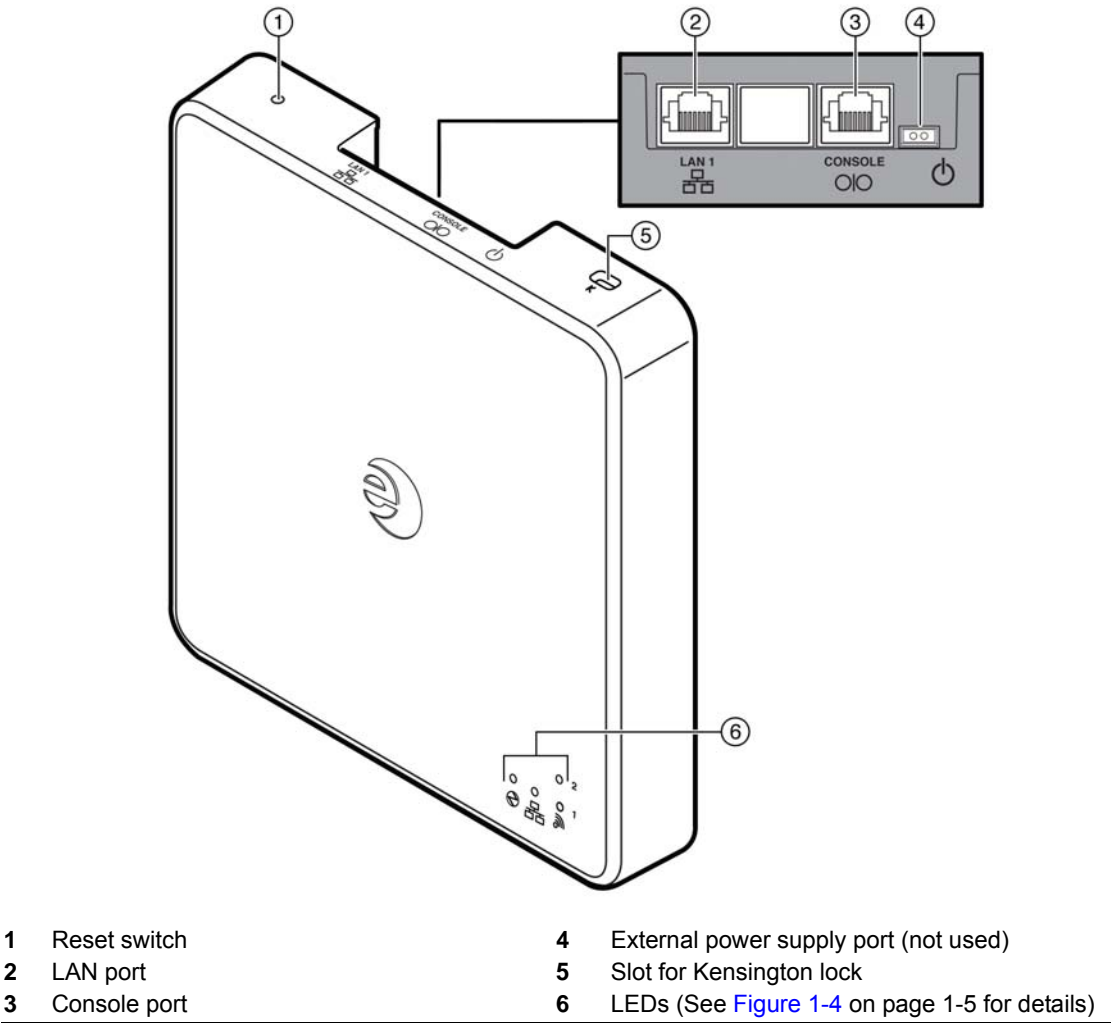
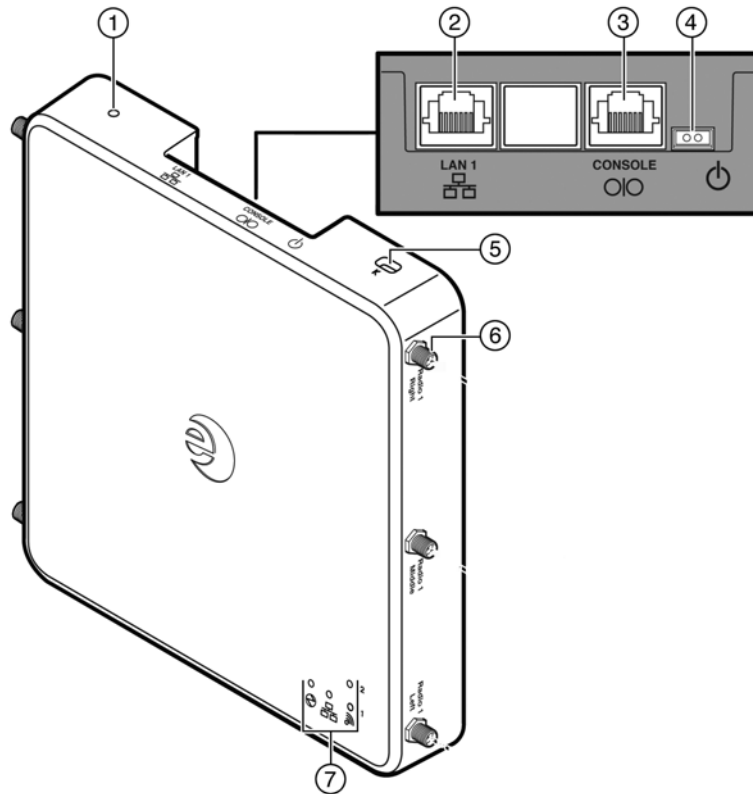
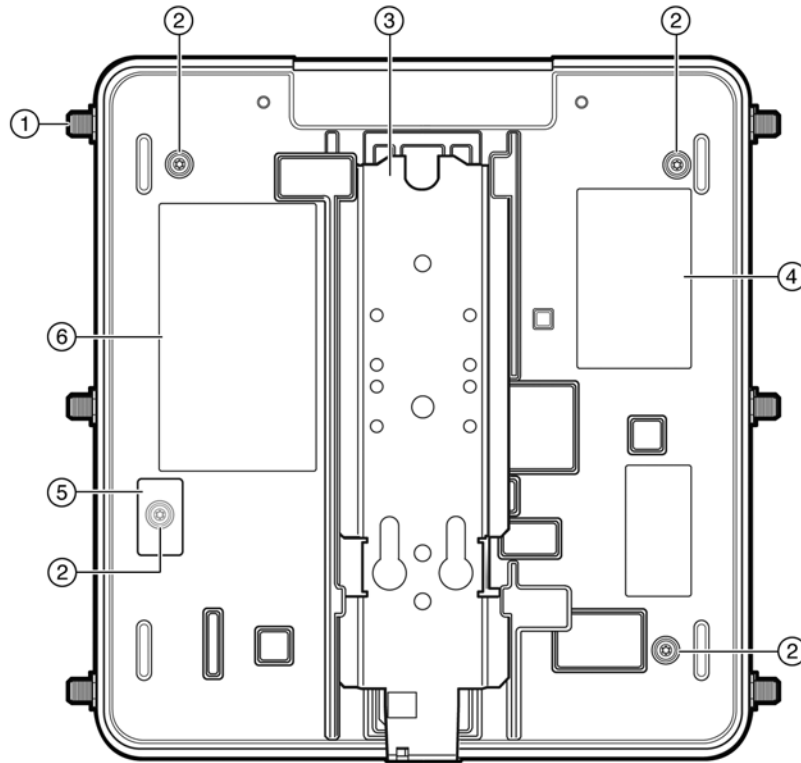


Figure 1-2 Enterasys Wireless AP3710e Front View



- | | | | |
|---|---------------------------------------|---|---------------------------------------------------------------|
| 1 | Reset switch | 5 | Slot for Kensington lock |
| 2 | LAN port | 6 | RSMA External antenna connectors (6) |
| 3 | Console port | 7 | LEDs (See Figure 1-4 on page 1-5 for details) |
| 4 | External power supply port (not used) | | |

Figure 1-3 WS-AP3710 e Back View



- | | | | |
|---|-------------------------|---|----------------------|
| 1 | RSMA antenna connectors | 4 | Product Label |
| 2 | Back Plate Screws | 5 | Tamper Evident Label |
| 3 | Mount Bracket | 6 | Regulatory Label |
-

WS-AP3710 LED Indicators

Both models of the WS-AP3710 have four LED indicators, shown in [Figure 1-4](#) below. The LEDs provide status information, described in [Table 1-1](#), on the current state of the WS-AP3710. For more information, see the *Enterasys Wireless Convergence Software User Guide*.

Figure 1-4 WS-AP3710 LEDs (Front, lower right)

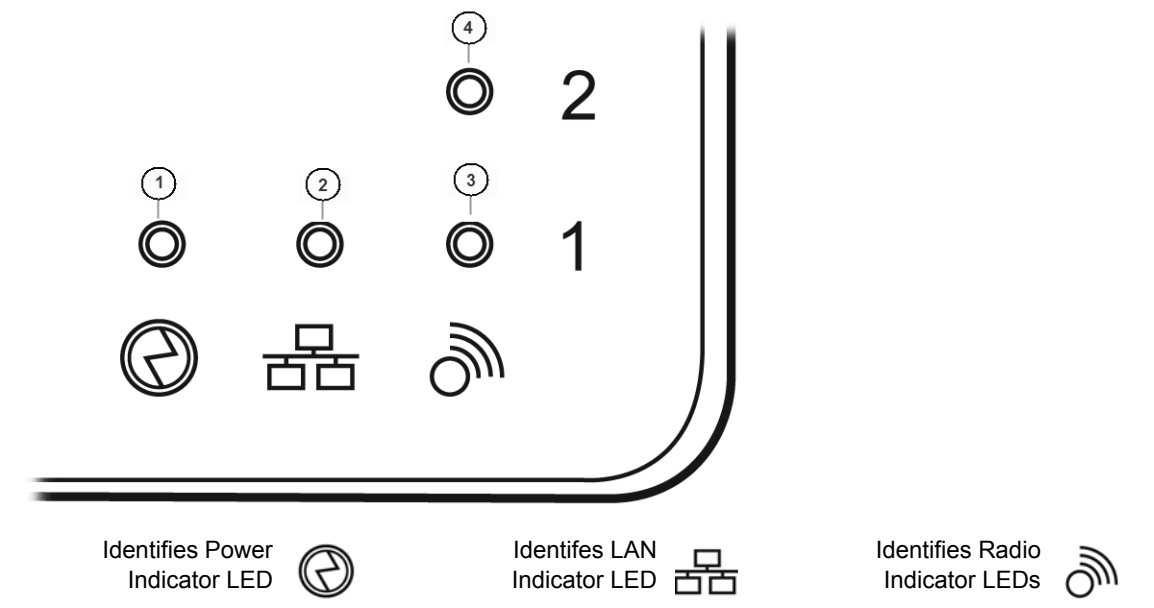


Table 1-1 WS-AP3710 LED Indications

LED	Status	Description
1 (AP status)	On Green	Indicates the WS-AP3710 is working normally.
	Flashing Green	Indicates: <ul style="list-style-type: none">• running a self test• loading software program
	On Red	Indicates a CPU/system failure.
2 (Ethernet link state)	On Green	Indicates a valid 100Mbps Ethernet link.
	On Blue	Indicates a valid 1Gbps Ethernet link.
	Off	Indicates the link is down.
3 (Radio 1 status)	On Green	Indicates Radio 1 is enabled.
4 (Radio 2 status)	On Green	Indicates Radio 2 is enabled.

Common Architectural Features

Console Port

The WS-AP3710 includes a single RJ45 console port (shown in [Figure 1-1](#) on page 1-2) for debug purposes. This port enables connection of a console device to the AP through a serial cable. The

console device can be a PC or workstation running a VT-100 terminal adapter emulator, or a VT-100 terminal.

LAN Port

The WS-AP3710 has one 10/100/1000BaseT RJ45 LAN port (see [Figure 1-1](#) on page 1-2) that can be attached directly to a 10/100/1000BaseT LAN segment. This segment must conform to the IEEE 802.3 or 802.3u specifications.

The APs appear as Ethernet nodes and perform a bridging function by moving packets from the wired LAN to remote workstations on the wireless infrastructure.

The LAN ports also support power over Ethernet (PoE) based on the IEEE 802.3at standard. Refer to “[Installation](#)” on page 2-1, for information on supplying power to the AP network port from a network device, such as a switch, that provides Power over Ethernet (PoE).

Reset Switch

The WS-AP3710 provides a Reset Switch to reset or restore factory default configurations. Use a pen tip or a nail to press the switch button through the hole (located on the top side of the AP). If you hold down the button for less than 5 seconds, the AP performs a software interrupt, causing it to drop all connections and reset. If you hold the button down for 5 seconds or more, any configuration changes are removed, and the factory default configuration restores to the AP.

Kensington Lock Slot

There is a slot for a Kensington lock on the top side of the AP. See Kensington lock documentation for instructions on use of the lock.

Installation

This chapter provides installation instructions for the Enterasys Wireless WS-AP3710 access point.

For information about...	Refer to page...
Unpacking the WS-AP3710	2-1
Accessories	2-1
Access Point Installation Procedures	2-2

Unpacking the WS-AP3710

To unpack the access point:

1. Open the box and remove the packing material protecting the AP.
2. Verify that the carton contains the items listed in [Table 2-1](#).

Table 2-1 AP3710 Package Contents

Quantity	Item
1	AP3710
1	Mounting Bracket with screw
1	Quick Reference card

3. Perform a visual inspection of the AP for any signs of physical damage. Contact Enterasys Networks if there are any signs of damage. Refer to “[Getting Help](#)” on page xi for details.

Accessories

The following accessories are available for the Enterasys Wireless AP3710. For ordering information, contact your Enterasys sales representative.

- Ceiling T-bar rail mount kit, part number WS-MB3700-01

Access Point Installation Procedures



Electrical Hazard: This product should be installed and serviced by a qualified licensed technician, electrician, or electrical maintenance person familiar with its operation and the hazards involved.

These procedures describe how to attach the AP3710 to a drop ceiling (flat or protruded), how to mount the AP to a wall, and how to mount the AP on an existing AP mount plate or a junction box.

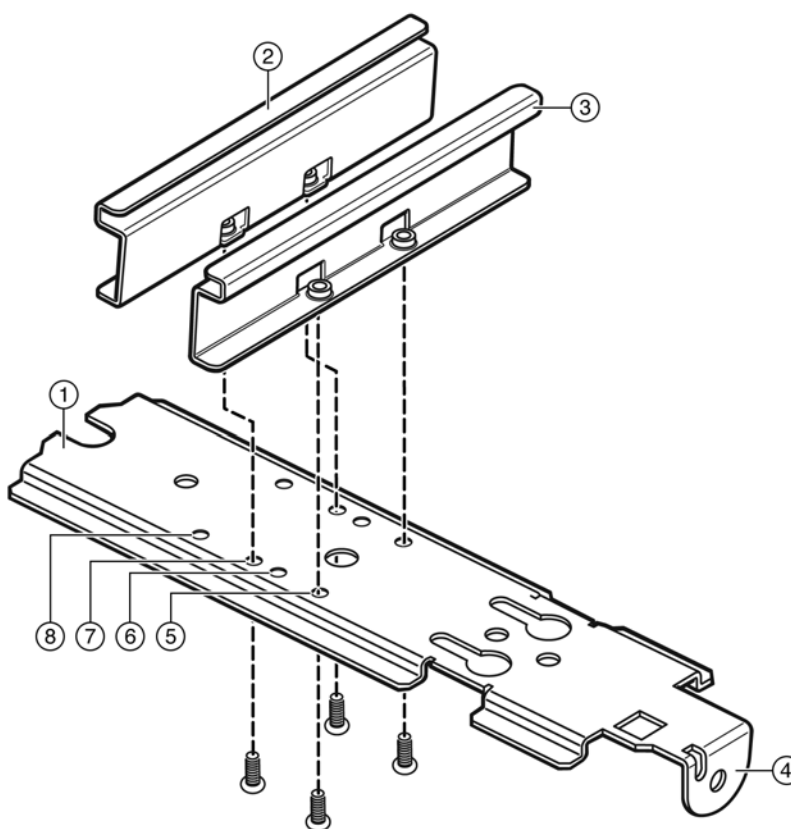
Mounting the AP3710 to a Drop Ceiling

To mount the AP to a drop ceiling, you need the separately orderable T-bar rail mount kit (WS-MB3700-01). T-bar rail clamps can be used to mount APs on flat or protruded drop ceilings.

To attach the AP3710 to a drop ceiling:

1. Attach the first of the two T-bar rail clamps (it doesn't matter which) to the universal mount bracket that ships with the access point. Place the clamp against the top of the plate so that its two screw holes match up to the topmost pair of countersink holes, and screw in the provided screws from underneath the mounting bracket as shown in [Figure 2-1](#).

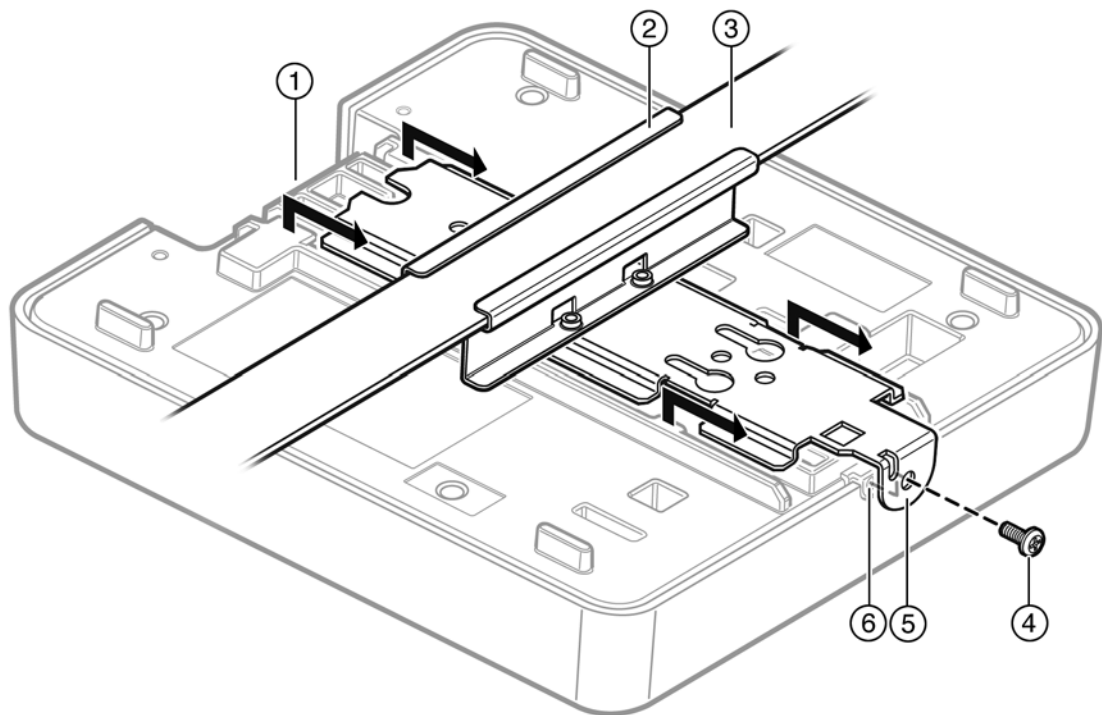
Figure 2-1 Mounting Bracket and T-bar Rail Clamp



- | | | | |
|---|--------------------|---|---------------------------------------|
| 1 | Mounting Bracket | 5 | Top Pair Countersink Holes |
| 2 | T-bar Rail Clamp 2 | 6 | Countersink Hole Pair for 9/16" Rail |
| 3 | T-bar Rail Clamp 1 | 7 | Countersink Hole Pair for 15/16" Rail |
| 4 | Locking Tab | 8 | Countersink Hole Pair for 1.5" Rail |

2. Attach the second T-bar rail clamp to the bracket with its two screw holes matching up to the pair of countersink holes at the width needed for the rails you have, as shown [Figure 2-1](#). Turn the screws into the mount bracket countersink holes from beneath, no more than one or two turns so the second clamp is attached but loose.
3. Remove the ceiling panels around the drop ceiling T-bar rails where you intend to mount the AP. Verify that the Ethernet cable that will connect to the AP can reach the AP at the point where you plan to mount it.
4. Hold the bracket and clamp assembly in one hand with the two clamps spread and held apart by a finger, and fit the edges of the clamps over the T-bar rail on both sides of the rail at once. Release the clamps over the rail and tighten the screws the rest of the way in the countersink holes.
5. Fit the back of the AP against the mounting bracket with the locking tab aligned with the lock screw hole, and slide it backward so that the end of the AP is against the locking tab, as shown in [Figure 2-2](#).

Figure 2-2 Attaching the AP to the Ceiling Mount Assembly



- | | |
|------------------------------|----------------------|
| 1 Connector Bay | 4 Locking Screw |
| 2 Bracket and Clamp Assembly | 5 Locking Tab |
| 3 T-bar Rail | 6 Locking Screw Hole |

6. **Screw the mounting screw into the locking tab and hole to secure the AP in place ([Figure 2-2](#)).**



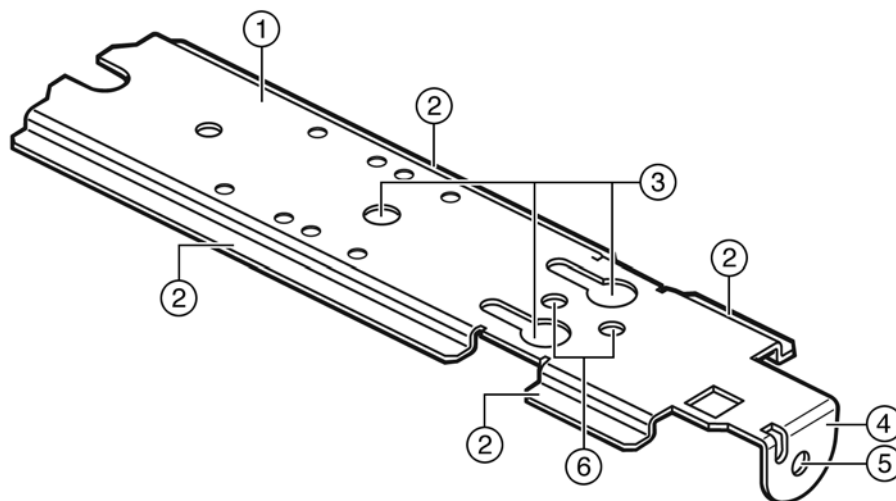
Warning: If the screw is not inserted as described in this step, there is a strong risk the Enterasys Wireless AP3710 will fall from the bracket.

7. Make a hole through the ceiling panel closest to the connector bay on the AP. Then run the Ethernet cable through the hole and into the LAN port (RJ45 Ethernet port) in the connector bay.
8. Replace the displaced ceiling panels.

Mounting the AP3710 to a Wall

Mounting the access point to a wall uses the mounting bracket that ships with the AP. Screws for attaching the AP to a wall are not supplied with the product, however, because the type and length of the screws will depend on the wall type and thickness.

Figure 2-3 Wall Mounting Bracket



- | | | | |
|---|--------------------------------|---|--------------------------|
| 1 | Mounting Bracket, flat side up | 4 | Locking Tab |
| 2 | Bracket Side Rails | 5 | Locking Screw Hole |
| 3 | Wall mounting holes | 6 | Junction Box Screw Holes |

To attach the AP3710 to a wall:

1. Determine the spot on the wall where the AP is to be mounted, preferably high up on the wall (near the ceiling for maximum radio wave dispersion) but in reach of the Ethernet cable and a wall power outlet if you are not able to use Power over Ethernet.
2. Place the flat side of the AP wall mounting bracket firmly against the wall surface, with the locking tab facing out, and at the bottom.

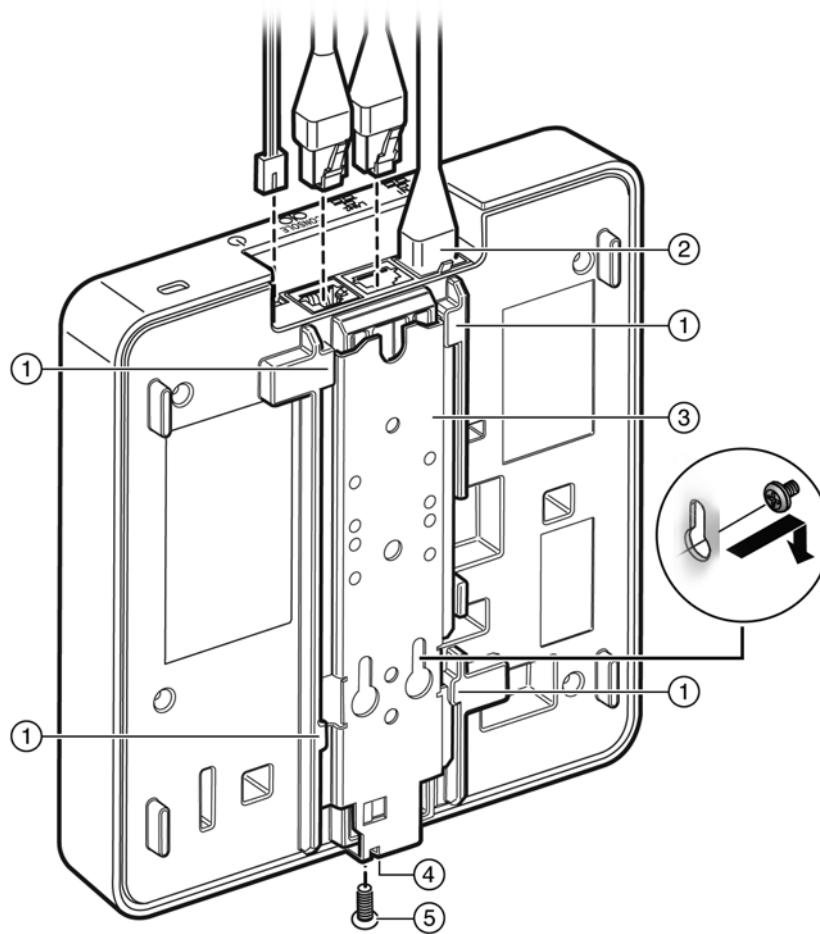


Note: The recommended orientation for the bracket is mounted on the wall vertically with the locking tab at the bottom. This means the AP will be mounted with the cable ports at the top. The bracket may be reversed (with locking tab at the top) so that the cable ports are at the bottom, but this requires holding the AP in place until the locking screw is firmly screwed in.

3. Secure the bracket to the wall with three screws (see [Figure 2-4](#) on page 2-5) through the central wall mounting holes.



Note: Screws for attaching the AP to a wall are not supplied with the product. The type and length of the screws will depend on the wall type and thickness.

Figure 2-4 Mounting the AP on the Mounting Bracket

- | | |
|--------------------|--------------------------------------|
| 1 Rail slots | 4 Locking Tab and Locking Screw Hole |
| 2 Ethernet Cables | 5 Locking Screw |
| 3 Mounting Bracket | |

- Plug the Ethernet cable into the RJ-45 port (and plug the power cord into the power port, if applicable) on the back of the AP before mounting the AP on the bracket.
- Place the back of the AP against the mounting bracket so that the bracket side rails fit into the rail slots on the back of the AP and the locking screw hole in the AP aligns with the locking tab. Slide the AP down until the AP rests on the locking tab, and screw in the locking screw through the locking tab and locking screw hole. [Figure 2-4](#) shows what the AP would look like with the mounting bracket in place.



Warning: If the locking screw is not inserted as described in this step, there is a strong risk the Enterasys Wireless AP3710 will fall from the bracket.

Mounting on a Junction Box, or in Place of an Older AP

You can replace an older AP or mount the AP3710 on a junction box.

- If there is a mounting bracket plate already in place from an older AP model, remove it.
- Attach the AP mounting bracket where the older mounting bracket was, or directly to a junction box, with two screws through the bracket junction box screw holes into the

corresponding holes on the junction box (see [Figure 2-3](#) for location of junction box screw holes).

3. Plug the Ethernet cable into the RJ-45 port (and plug the power cord into the power port, if applicable) on the back of the AP before mounting the AP on the bracket.
4. Place the back of the AP against the mounting bracket so that the bracket side rails fit into the rail slots on the back of the AP and the locking screw hole in the AP aligns with the locking tab. Slide the AP down until the AP rests on the locking tab, and screw in the locking screw through the locking tab and locking screw hole. [Figure 2-4](#) on page 2-5 shows what the AP would look like with the mounting bracket in place.



Warning: If the screw is not inserted as described in this step, there is a strong risk the Enterasys Wireless AP3710 will fall from the bracket.

LAN/Console Connections

The WS-AP3710 has both a LAN and a Console port. Refer to [Figure 1-1](#) on page 1-2 for the location of these ports.

During administration and maintenance through the LAN or Console, the AP must have a power connection through either an Ethernet PoE cable or a DC power supply.

Power Connections

The AP can be powered only by Power over Ethernet (PoE), which is power provided through the RJ45 Ethernet port (LAN port) on the top of the AP. This is the preferred method of powering the AP on ceiling and high wall installations.



Specifications

This appendix lists the specifications for the WS-AP3710 access point.

For information about...	Refer to page...
WS-AP3710 Technical Specifications	A-1
Internal Antenna Radiation Patterns	A-2
External Antennas	A-4

WS-AP3710 Technical Specifications

This section provides the technical specifications for the WS-AP3710 i, and WS-AP3710e access points. In [Table A-1](#), the specifications for both models are the same, except where noted otherwise.

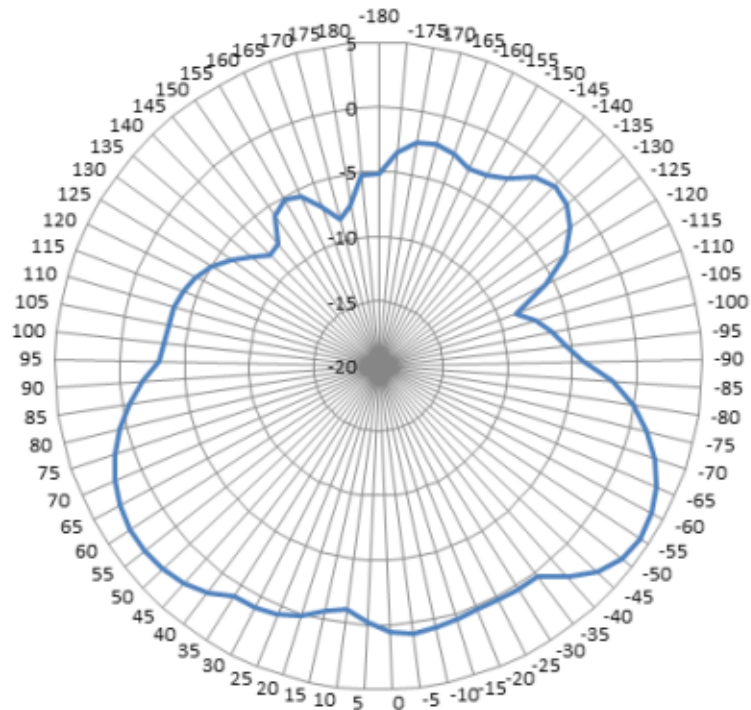
Table A-1 Specifications for the WS-AP3710 i

Item	Specification
Enclosure material	Metal base, plastic housing
Power source	802.3af compliant PoE PD
Power consumption	< 12.94W (Max.)
Outside dimensions (max) WS-AP3710e	Length: 190.5mm (7.5") Width: 145mm to 180.0mm (7.5" to 7.09") Thickness (not including mounting bracket): 29mm (1.13") to 38mm (1.5").
Antenna (AP3710i only)	6x internal antennas, single band
Uplink Interface	GbE Ethernet x1 with PoE
RoHS compliant	Yes
Radio Configuration	IEEE 802.11a/b/g/n, 2.4/5GHz single-band, Dual-radio, 3x3:3 MIMO
Operating temperature	32° F to 122° F (0° C to +50° C)

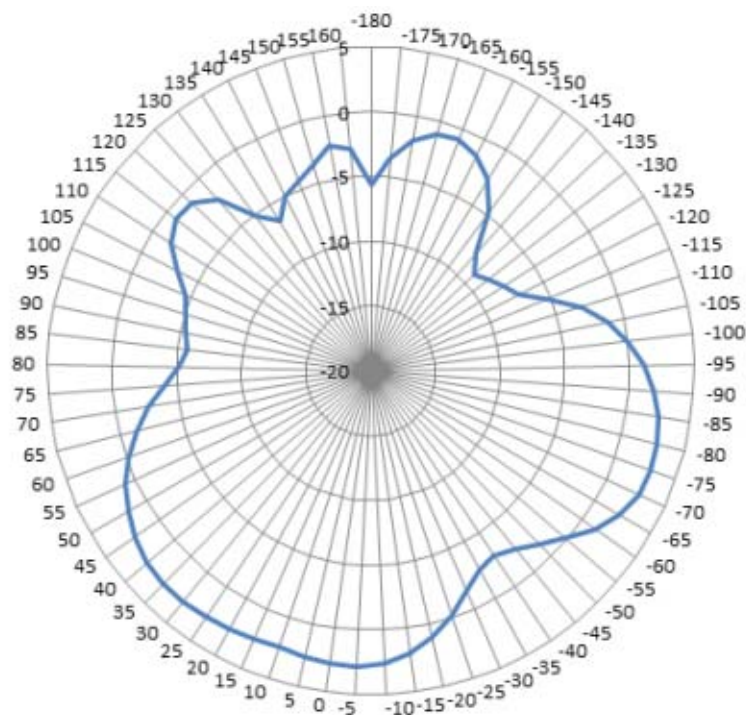
Internal Antenna Radiation Patterns

The following radiation patterns apply to the antennas in the WS-AP3710 i only. In these diagrams, 0 degree is AP's front and +/- 180 degree is AP's back.

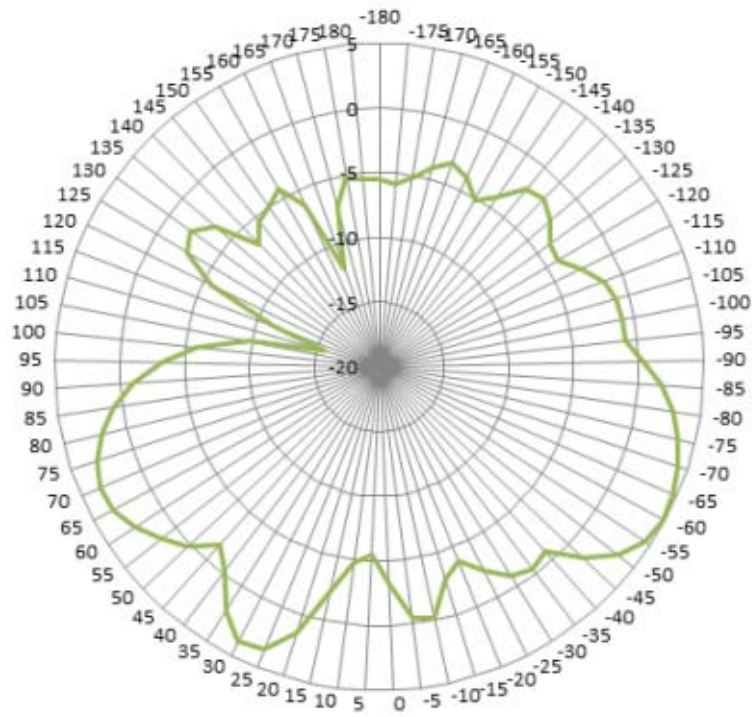
Horizontal Radiation Pattern 2.4 GHz



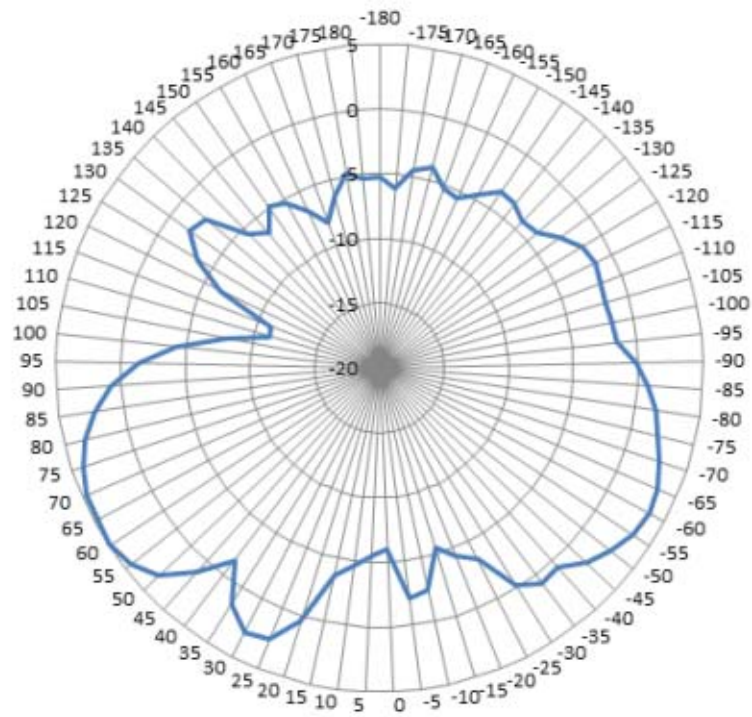
Vertical Radiation Pattern 2.4 GHz



Horizontal Radiation Pattern 5 GHz



Vertical Radiation Pattern 5 GHz



External Antennas

[Table A-2](#) lists the certified external antennas for AP3710e. For more detailed specifications and radiation pattern diagrams, see the *Enterasys Wireless External Antenna Site Preparation and Installation Guide*.

Table A-2 Certified External Antennas for WS-AP3710e

Model	Application	Description	Gain (dBi)	Frequency (GHz)	Connector Type
WS-AI-DX02360	Indoor	MIMO; Dual-band	2 dBi	2.4–2.5, 5.15–5.85	RSMA
WS-AI-DT04360	Indoor	MIMO; Panel	3.0 dBi, 4.0 dBi	2.4–2.5, 4.9–5.9	RSMA
WS-AI-DT05120	Indoor	MIMO; Sector; Dual-band	5 dBi x 3, 2:1	2.3 – 2.7, 4.9 – 6.1	RSMA

FCC/IC Power Setting Tables

[Table A-3](#) and [Table A-4](#) show the necessary FCC/IC-required software power settings for each certified antenna, in each 802.11 mode for WS-AP3710e.

Table A-3 FCC/IC Antenna Channel Power Settings, Modes B, G, GN-HT20, GN-HT40

MODE	CHANNEL	ANT. #1 WS-AI-DX02360	ANT. #2 WS-AI-DT04360	ANT. #3 WS-AI-DT05120
B	1	17	17.5	17
	2	18	18	18
	3	18	18	18
	4	18	18	18
	5	18	18	18
	6	18	18	18
	7	18	18	18
	8	18	18	18
	9	18	18	18
	10	18	18	18
	11	17.5	18	17.5
	AUTO SELECT	17	17.5	17

Table A-3 FCC/IC Antenna Channel Power Settings, Modes B, G, GN-HT20, GN-HT40

MODE	CHANNEL	ANT. #1 WS-AI-DX02360	ANT. #2 WS-AI-DT04360	ANT. #3 WS-AI-DT05120
G	1	13.5	14.5	14.5
	2	19	19	19
	3	19	19	19
	4	19	19	19
	5	19	19	19
	6	19	19	19
	7	19	19	19
	8	19	19	19
	9	19	19	19
	10	19	19	19
	11	15	14.5	13.5
	AUTO SELECT	13.5	14.5	13.5
GN-HT20	1	12.5	13	12
	2	20	20	20
	3	20	20	20
	4	20	20	20
	5	20	20	20
	6	20	20	20
	7	20	20	20
	8	20	20	20
	9	20	20	20
	10	20	20	20
	11	14	14	13
	AUTO SELECT	12.5	13	12
GN-HT40	1-5	11.5	11	9.5
	2-6	14.5	14.5	13.5
	3-7	14.5	14.5	13.5
	4-8	14.5	14.5	13.5
	5-9	14.5	14.5	13.5
	6-10	14.5	14.5	13.5
	7-11	12.5	12.5	10
	AUTO SELECT	11.5	11	9.5

Table A-4 FCC/IC Antenna Channel Power Settings, Modes A, AN-HT20, AN-HT40

MODE	CHANNEL	ANT. #1 WS-AI-DX02360	ANT. #2 WS-AI-DT04360	ANT. #3 WS-AI-DT05120
A	36	10.5	8.5	7
	40	10.5	8.5	7
	44	10.5	8.5	7
	48	10.5	8	7.5
	149	18	18	14
	153	18	18	15
	157	18	18	15
	161	18.5	18.5	14.5
	165	18.5	18.5	14.5
	AUTO SELECT	10.5	8	7
AN-HT20	36	11.5	8.5	8
	40	11	8.5	8
	44	11	8.5	8
	48	11	8.5	7.5
	149	18.5	18.5	14.5
	153	18.5	18.5	15.5
	157	18.5	18.5	15.5
	161	18.5	18.5	15.5
	165	18.5	18.5	15
	AUTO SELECT	11	8.5	7.5
AN-HT40	36	10.5	9	9
	40	10.5	9	9
	44	12	11	10
	48	12	11	10
	149	15	15	14.5
	149-153	15	15	14.5
	157-161	15	15	14
	AUTO SELECT	10.5	9	9

Regulatory Information



Warning: Warnings identify essential information. Ignoring a warning can lead to problems with the application.

This appendix provides regulatory information for the Enterasys Wireless WS-AP3710 access point.



Note: Throughout this appendix, the term 'Enterasys Wireless AP3710' refers to the AP models WS-AP3710i and WS-AP3710e. Specific AP models are only identified in this appendix where it is necessary to do so.



Warning: Changes or modifications made to the Enterasys Wireless AP3710 which are not expressly approved by Enterasys could void the user's authority to operate the equipment.

Only authorized Enterasys service personnel are permitted to service the system. Procedures that should be performed only by Enterasys personnel are clearly identified in this guide.



Note: The Enterasys Wireless AP3710 is in compliance with the European Directive 2002/95/EC on the restriction of the use of certain hazardous substances (RoHS) in electrical and electronic equipment.

Enterasys Wireless WS-AP3710

The following regulatory information applies to the Enterasys Wireless access point WS-AP3710.

United States

FCC Declaration of Conformity Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

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 when the equipment is operated in a residential and business environment. This equipment generates, uses, and radiates radio frequency energy, and if not installed and used in accordance with instructions, may cause harmful interference. However, there is no guarantee that interference will not occur. If this equipment does cause harmful interference, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the transmitting antenna.
- Increase the separation between the equipment or devices.
- Connect the equipment to an outlet other than the receiver's.
- Consult a dealer or an experienced radio/TV technician for suggestions.

USA Conformance Standards

This equipment meets the following conformance standards:

Safety

- UL 60950-1

EMC

- FCC CFR 47 Part 15, Class B

Radio transceiver

- CFR 47 Part 15.247, Subpart C
- CFR 47 Part 15.407, Subpart E

Other

- IEEE 802.11a (5 GHz)
- IEEE 802.11b/g (2.4 GHz)
- IEEE 802.11n
- IEEE 802.3af (PoE)



Warning: The Enterasys Wireless AP3710 must be installed and used in strict accordance with the manufacturer's instructions as described in this guide and related documentation for the device to which the Enterasys Wireless AP3710 is connected. Any other installation or use of the product violates FCC Part 15 regulations.

This Part 15 radio device operates on a non-interference basis with other devices operating at the same frequency when using the antennas provided or other Enterasys-certified antennas. Any changes or modifications to the product not expressly approved by Enterasys could void the user's authority to operate this device.

For the product available in the USA market, only channels 1 to 11 can be operated. Selection of other channels in the 2.4 GHz band is not possible.

This device has been designed to operate with the antennas listed in “[External Antennas](#)” on page A-4, and having a maximum gain of 5 dBi. Antennas not included in this list or having a gain greater than 5 dBi are strictly prohibited for use with this device. The required antenna impedance is 50 ohms.

This Transmitter Must Not Be Co-located or Operating in Conjunction with Any Other Antenna or Transmitter.

Professional Installation Notice:

To comply with FCC part 15 rules in the United States, the system must be professionally installed to ensure compliance with the Part 15 certification. It is the responsibility of the operator and professional installer to ensure that only certified systems are deployed in the United States. The

use of the system in any other combination (such as co-located antennas transmitting the same information) is expressly forbidden.

FCC RF Radiation Exposure Statement

The Enterasys Wireless AP3710 complies with FCC RF radiated exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This device has been tested and has demonstrated compliance when simultaneously operated in the 2.4 GHz and 5 GHz frequency ranges. This device must not be co-located or operated in conjunction with any other antenna or transmitter.

The radiated output power of the Enterasys Wireless AP3710 is below the FCC radio frequency exposure limits as specified in "Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields" (OET Bulletin 65, Supplement C). This equipment should be installed and operated with a minimum distance of 25 cm between the radiator and your body or other co-located operating antennas.

Canada

Industry Canada Compliance Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of Industry Canada.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques," NMB-003 édictée par le Industrie Canada.

This device complies with RSS-210 of the Industry Canada Rules. Operation is subject to the following conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.
- This Class B digital apparatus complies with Canadian ICES-003.
- Operation in the 5150-5250 MHz band is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems.
- Users are advised that high power radars are allocated as primary users (meaning they have priority) and can cause interference in the 5250-5350 MHz and 5470-5850 MHz bands of LE-LAN devices.
- For the product available in the Canadian market, only channels 1 to 11 can be operated. Selection of other channels in the 2.4 GHz band is not possible.
- Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux conditions suivantes:

- Le dispositif ne doit pas produire de brouillage préjudiciable.

- Ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.
- Ce dispositif est conforme à la norme NMB-003 édictée par le Industrie Canada.
- Les dispositifs fonctionnant dans la bande 5 150-5 250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux.
- Les utilisateurs devraient aussi être avisés que les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) pour les bandes 5250-5350 MHz et 5470-5850 MHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL.
- Pour le produit disponible sur le marché canadien, seuls les canaux 1 à 11 peuvent être utilisés. Il est impossible de sélectionner d'autres canaux dans la bande de 2.4 GHz.
- Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

Canada Conformance Standards

This equipment meets the following conformance standards:

Safety

- C22.2 No.60950-1-03

EMC

- ICES-003, Class B

Radio transceiver

- RSS-210 (2.4 GHz and 5GHz)

Other

- IEEE 802.11a (5 GHz)
- IEEE 802.11b/g (2.4 GHz)
- IEEE 802.11n
- IEEE 802.3af (PoE)

RF Safety Distance

The antennas used for this transmitter must be installed to provide a separation distance of at least 25 cm from all persons and must not be co-located or operating in conjunction with another antenna or transmitter.

Les antennes de ce transmetteur doivent être installées à une distance d'au moins 25 cm de toute personne et ne doivent pas être en placées à proximité immédiate ou utilisées conjointement avec une autre antenne ou un autre transmetteur

European Community

The Enterasys Wireless AP3710 is designed for use in the European Union and other countries with similar regulatory restrictions where the end user or installer is allowed to configure the Enterasys Wireless AP3710 for operation by entry of a country code relative to a specific country. After the country code is selected, the Enterasys Wireless AP3710 uses the proper frequencies and power outputs for that country code.

The Enterasys Wireless AP3710 is intended for indoor use and must be installed in a proper indoor location. Contact local Authority for procedure to follow and regulatory information. For more details on legal combinations of frequencies, power levels and antennas, contact Enterasys.

Declaration of Conformity with R&TTE Directive of the European Union 1999/5/EC

The following symbol indicates compliance with the Essential Requirements of the R&TTE Directive of the European Union (1999/5/EC).



Declaration of Conformity in Languages of the European Community

English	Hereby, Enterasys, declares that this Radio LAN device is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Finnish	Valmistaja Enterasys vakuuttaa täten että Radio LAN device tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Dutch	Hierbij verklaart Enterasys dat het toestel Radio LAN device in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG. Bij deze verklaart Enterasys dat deze Radio LAN device voldoet aan de essentiële eisen en aan de overige relevante bepalingen van Richtlijn 1999/5/EC.
French	Par la présente Enterasys déclare que l'appareil Radio LAN device est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE. Par la présente, Enterasys déclare que ce Radio LAN device est conforme aux exigences essentielles et aux autres dispositions de la directive 1999/5/CE qui lui sont applicables.
Swedish	Härmed intygar Enterasys att denna Radio LAN device står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.
Danish	Undertegnede Enterasys erklærer herved, at følgende udstyr Radio LAN device overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
German	Hiermit erklärt Enterasys die Übereinstimmung des "WLAN Wireless Controller bzw. Access Points" mit den grundlegenden Anforderungen und den anderen relevanten Festlegungen der Richtlinie 1999/5/EG.
Greek	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Enterasys ΔΗΛΩΝΕΙ ΟΤΙ Radio LAN device ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
Icelandic	Enterasys lýsir her með yfir að thessi bunadur, Radio LAN device, uppfyllir allar grunnkröfur, sem gerðar eru í R&TTE tilskipun ESB nr 1999/5/EC.
Italian	Con la presente Enterasys dichiara che questo Radio LAN device è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Spanish	Por medio de la presente Enterasys declara que el Radio LAN device cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.

Portuguese	Enterasys declara que este Radio LAN device está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Malti	Hawnhekk, Enterasys, jiddikjara li dan Radio LAN device jikkonforma mal-htigijiet essenzzjali u ma provvedimenti ohrajn rilevanti li hemm fid-Direttiva 1999/5/EC.

New Member States Requirements of Declaration of Conformity

Estonian	Käesolevaga kinnitab Enterasys seadme Radio LAN device vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
Hungary	Alulírott, Enterasys nyilatkozom, hogy a Radio LAN device megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
Slovak	Enterasys týmto vyhlasuje, že Radio LAN device spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
Czech	Enterasys tímto prohlašuje, že tento Radio LAN device je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES."
Slovenian	Šiuo Enterasys deklaruoja, kad šis Radio LAN device atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
Latvian	Ar šo Enterasys deklarē, ka Radio LAN device atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem
Lithuanian	Enterasys deklaruoja, kad Radio LAN device atitinka 1999/5/EC Direktyvos esminius reikalavimus ir kitas nuostatas".
Polish	Niniejszym, Enterasys, deklaruje, że Radio LAN device spełnia wymagania zasadnicze oraz stosowne postanowienia zawarte Dyrektywie 1999/5/EC.

European Conformance Standards

This equipment meets the following conformance standards:

Safety

- 2006/95/EC Low Voltage Directive (LVD)
- IEC/EN 60950-1 + National Deviations

EMC (Emissions / Immunity)

- 2004/108/EC EMC Directive
- EN 55011/CISPR 11, Class B, Group 1 ISM
- EN 55022/CISPR 22, Class B
- EN 55024/CISPR 24, includes IEC/EN 61000-4-2,3,4,5,6,11
- EN 61000-3-2 and -3-3 (Harmonics and Flicker)
- EN 60601-1-2 (EMC immunity for medical equipment)
- EN 50385 (EMF)
- ETSI/EN 301 489-1 & -17

Radio transceiver

- R&TTE Directive 1999/5/EC
- ETSI/EN 300 328 (2.4 GHz)
- ETSI/EN 301 893 (5 GHz)

Other

- IEEE 802.11a (5 GHz)
- IEEE 802.11b/g (2.4 GHz)
- IEEE 802.11n
- IEEE 802.3af (PoE)

RoHS

- European Directive 2002/95/EC

Conditions of use in the European Community

Some EU countries allow outdoor operation with limitations and restrictions, which are described in this section. It is the responsibility of the end user to ensure operation in accordance with these rules, frequencies, and transmitter power output. The Enterasys Wireless AP3710 must not be operated until configured for the customer's geographic location.



Caution: The user or installer is responsible to ensure that the Enterasys Wireless AP3710 is operated according to channel limitations, indoor / outdoor restrictions, license requirements, and within power level limits for the current country of operation. A configuration utility has been provided with the Wireless AP to allow the end user to check the configuration and make necessary configuration changes to ensure proper operation in accordance with the spectrum usage rules for compliance with the European R&TTE directive 1999/5/EC.



Caution: Please follow the instructions in this user guide to configure the Enterasys Wireless AP3710.

- Each Wireless AP is configured with a default group of settings. There is the ability to change these settings. The user or installer is responsible to ensure that each Enterasys Wireless AP3710 is configured properly.
- The software within the Wireless AP automatically limits the allowable channels and output power determined by the selected country code. Selecting the incorrect country of operation or misidentifying the antenna being used, may result in illegal operation and may cause harmful interference to other systems.
- This device employs a radar detection feature required for European Community operation in the 5 GHz band. This feature is automatically enabled when the country of operation is correctly configured for any European Community country. The presence of nearby radar operation may result in temporary interruption of operation of this device. The radar detection feature will automatically restart operation on a channel free of radar.
- The 5150- 5350 MHz band, channels 36, 40, 44, 48, 52, 56, 60, or 64, are restricted to indoor use only.
- The 2.4 GHz band, channels 1 - 13, may be used for indoor use but there may be some channel restrictions.

European Spectrum Usage Rules

The AP configured with approved internal antennas can be used for indoor transmissions throughout the European community as displayed in [Table B-1](#). Some restrictions apply in France, Greece, and Italy.

Table B-1 European Spectrum Usage Rules

Country	5.15-5.25 (GHz) Channels: 36,40,44,48	5.25-5.35 (GHz) Channels: 52,56,60,64	5.47-5.725 (GHz) Channels: 100,104,108,112,116, 132,136,140	2.4-2.4835 (GHz) Channels: 1 to 13 (Except Where Noted)
Austria	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Belgium	Indoor only	Indoor only	Indoor or outdoor *	Indoor or outdoor
Bulgaria	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Croatia	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Cyprus	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Czech Rep.	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Denmark	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Estonia	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Finland	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
France	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Germany	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Greece	Indoor only	Indoor only	Indoor (Outdoor w/License)	Indoor (Outdoor w/license)
Hungary	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Iceland	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Ireland	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Italy	Indoor only	Indoor only	Indoor or outdoor	Indoor (Outdoor w/license)
Latvia	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Liechtenstein	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Lithuania	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Luxembourg	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Malta	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Netherlands	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Norway	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Poland	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Portugal	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Romania	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Slovak Rep.	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Slovenia	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Spain	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Sweden	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Switzerland	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
Turkey	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor
U.K	Indoor only	Indoor only	Indoor or outdoor	Indoor or outdoor

Certifications of Other Countries

The Enterasys Wireless AP3710 has been certified for use in various other countries. Once the correct country code is selected, the Wireless AP automatically uses the proper frequencies and power outputs for that country code.

It is the responsibility of the end user to select the proper country code for the country within which the device will be operated, or run the risk violating local laws and regulations.

.Other Country Specific Compliance Standards, Approvals and Declarations

- IEC 60950-1 CB Scheme + National Deviations
- AS/NZS 60950.1 (Safety)
- AS/NZS 3548 (Emissions via EU standards – ACMA)
- AS/NZS 4288 (Radio via EU standards)
- EN 300 328 (2.4 GHz)
- EN 301 893 (5 GHz)
- EN 301 489-1 & -17 (RLAN)
- IEEE 802.11a (5 GHz)
- IEEE 802.11b/g (2.4 GHz)
- IEEE 802.11n
- IEEE 802.3af (PoE)

RF Safety Distance

The antennas used for this transmitter must be installed to provide a separation distance of at least 25 cm from all persons and must not be co-located or operating in conjunction with another antenna or transmitter.

