# cisco.



### Cisco Beacon Point Module — Hardware Installation Guide

First Published: 2017-11-03

#### **Americas Headquarters**

Cisco Systems, Inc. 170 West Tasman Drive San Jose, CA 95134-1706 USA http://www.cisco.com Tel: 408 526-4000 800 553-NETS (6387) Fax: 408 527-0883 THE SPECIFICATIONS AND INFORMATION REGARDING THE PRODUCTS IN THIS MANUAL ARE SUBJECT TO CHANGE WITHOUT NOTICE. ALL STATEMENTS, INFORMATION, AND RECOMMENDATIONS IN THIS MANUAL ARE BELIEVED TO BE ACCURATE BUT ARE PRESENTED WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. USERS MUST TAKE FULL RESPONSIBILITY FOR THEIR APPLICATION OF ANY PRODUCTS.

THE SOFTWARE LICENSE AND LIMITED WARRANTY FOR THE ACCOMPANYING PRODUCT ARE SET FORTH IN THE INFORMATION PACKET THAT SHIPPED WITH THE PRODUCT AND ARE INCORPORATED HEREIN BY THIS REFERENCE. IF YOU ARE UNABLE TO LOCATE THE SOFTWARE LICENSE OR LIMITED WARRANTY, CONTACT YOUR CISCO REPRESENTATIVE FOR A COPY.

The Cisco implementation of TCP header compression is an adaptation of a program developed by the University of California, Berkeley (UCB) as part of UCB's public domain version of the UNIX operating system. All rights reserved. Copyright © 1981, Regents of the University of California.

NOTWITHSTANDING ANY OTHER WARRANTY HEREIN, ALL DOCUMENT FILES AND SOFTWARE OF THESE SUPPLIERS ARE PROVIDED "AS IS" WITH ALL FAULTS. CISCO AND THE ABOVE-NAMED SUPPLIERS DISCLAIM ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, THOSE OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OR ARISING FROM A COURSE OF DEALING, USAGE, OR TRADE PRACTICE.

IN NO EVENT SHALL CISCO OR ITS SUPPLIERS BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR LOSS OR DAMAGE TO DATA ARISING OUT OF THE USE OR INABILITY TO USE THIS MANUAL, EVEN IF CISCO OR ITS SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Any Internet Protocol (IP) addresses and phone numbers used in this document are not intended to be actual addresses and phone numbers. Any examples, command display output, network topology diagrams, and other figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses or phone numbers in illustrative content is unintentional and coincidental.

All printed copies and duplicate soft copies of this document are considered uncontrolled. See the current online version for the latest version.

Cisco has more than 200 offices worldwide. Addresses and phone numbers are listed on the Cisco website at www.cisco.com/go/offices.

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: www.cisco.com go trademarks. Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1721R)

© 2017 Cisco Systems, Inc. All rights reserved.



### CONTENTS

PREFACE	Preface v Audience v Conventions v
	Related Documentation vi
	Communications, Services, and Additional Information vi
CHAPTER 1	Cisco Beacon Point Module 1
	Overview of Cisco Beacon Point Module 1
	About Cisco Beacon Point Module 1
	Cisco Beacon Point Module Features 3
	Technical Specifications 3
	Cisco Beacon Point Module Model Number 3
	Installing a Cisco Beacon Point 4
	Unpacking the Cisco Beacon Point Module 4
	Attaching Locking lever to AIR-AP-BRACKET-2 5
	Installing Cisco Beacon Point Module and APs Separately 6
	Installing the Cisco Beacon Point Module to the AP and Mounting as a Combined Unit 8
	Uninstalling Cisco Beacon Point Module <b>10</b>
	Cisco Beacon Point Module LEDs 11
CHAPTER 2	Declarations of Conformity and Regulatory Information 13
	Manufacturers Federal Communication Commission Declaration of Conformity Statement 13
	VCCI Statement for Japan 14
	Guidelines for Operating Cisco Virtual Beacon in Japan 15
	Japanese Translation 15
	English Translation 15

Canadian Compliance Statement 15 Statement 371—Power Cable and Power Injector 16 Industry Canada 16 This Device Meets FCC and International Guidelines for Exposure to Radio Waves 17

Cet appareil est conforme aux directives internationales en matière d'exposition aux fréquences radioélectriques **18** 

Additional Information on RF Exposure 18

Declaration of Conformity Statements 19



# **Preface**

- Audience, on page v
- Conventions, on page v
- Related Documentation, on page vi
- · Communications, Services, and Additional Information, on page vi

## Audience

This document is for Connected Mobile Experiences (CMX) network and IT administrators who deploy Cisco Beacon Point (BP) or Cisco Beacon Point Module (BPM) for high accuracy virtual beacon solution.

## **Conventions**

This document uses the following conventions:

#### Table 1: Conventions

Convention	Indication
bold font	Commands and keywords and user-entered text appear in <b>bold</b> font.
<i>italic</i> font	Document titles, new or emphasized terms, and arguments for which you supply values are in <i>italic</i> font.
[]	Elements in square brackets are optional.
{x   y   z }	Required alternative keywords are grouped in braces and separated by vertical bars.
[ x   y   z ]	Optional alternative keywords are grouped in brackets and separated by vertical bars.
string	A nonquoted set of characters. Do not use quotation marks around the string. Otherwise, the string will include the quotation marks.
courier font	Terminal sessions and information the system displays appear in courier font.
$\Leftrightarrow$	Nonprinting characters such as passwords are in angle brackets.
[]	Default responses to system prompts are in square brackets.

Convention	Indication
!, #	An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.
Means reader take note. Notes contain helpful suggestions or references to material not covered in the manual	
Means the following information will help you solve a problem.	
Means the following	ng information will help you solve a problem.
Means the followin	ng information will help you solve a problem.

### **Related Documentation**

For more information, see:

- https://support.cmxcisco.com/hc/en-us
- Cisco Beacon Center Configuration Guide

### **Communications, Services, and Additional Information**

- To receive timely, relevant information from Cisco, sign up at Cisco Profile Manager.
- To get the business impact you're looking for with the technologies that matter, visit Cisco Services.
- To submit a service request, visit Cisco Support.
- To discover and browse secure, validated enterprise-class apps, products, solutions and services, visit Cisco Marketplace.
- To obtain general networking, training, and certification titles, visit Cisco Press.
- To find warranty information for a specific product or product family, access Cisco Warranty Finder.

#### **Cisco Bug Search Tool**

Cisco Bug Search Tool (BST) is a web-based tool that acts as a gateway to the Cisco bug tracking system that maintains a comprehensive list of defects and vulnerabilities in Cisco products and software. BST provides you with detailed defect information about your products and software.



# **Cisco Beacon Point Module**

- Overview of Cisco Beacon Point Module, on page 1
- Installing a Cisco Beacon Point, on page 4

### **Overview of Cisco Beacon Point Module**

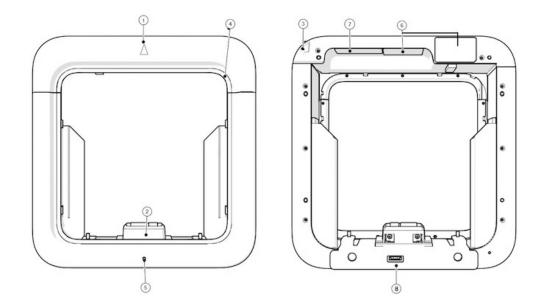
### **About Cisco Beacon Point Module**

Cisco Beacon Point Module (AIR-RM-VBLE2-K9=) is a Bluetooth Low Energy beacon module that is mounted on supported access points. The APs now has the ability to provide Wi-Fi access as well as act as BLE Beacons for Bluetooth-integrated clients. With Cisco Beacon Point Module, smart client devices can receive different signal strengths from the multiple integrated beacon to improve location calculations.

Deploying Bluetooth-integrated APs is similar to Wi-Fi location based service solution. The recommended density for deploying the Bluetooth-integrated APs is one per 1500-to-2500 sq.ft. The optimum height for a Bluetooth-integrated APs is 13 to 15 ft (3.9 to 4.6m). Cisco Beacon Center requires the correct physical orientation, position, and height of Bluetooth-integrated APs for providing clients with indoor navigation, turn-by-turn guidance and proximity messaging for best indoor navigation experience.

Bluetooth-integrated APs connect with Cisco Beacon Center over the internet using secure HTTPS protocol. Bluetooth-integrated APs, each have a unique IP address just like any enterprise grade networking device. Bluetooth-integrated APs should connect with Cisco Beacon Center for management and control. For Bluetooth-integrated APs to communicate with the Cisco Beacon Center, outbound communications from Cisco Beacon Point Module to the cloud service using port 80 (TCP) and 443 (TCP) must be possible.

#### Figure 1: Cisco Beacon Point Module Front View (AIR-RM-VBLE2-K9=)



#### Table 2:

Number	Description
1	Cisco Beacon Point Module pointing direction.
2	Host interface connector to access point. Draws power from the host bus interface with the access point.
3	Cisco Beacon Point Module swing arm latch screw.
4	Decorative gasket:
	Retain the gasket when Cisco Beacon Point Module is attached to AP3802I
	• Remove and discard the gasket when Cisco Beacon Point Module is attached to AP3802E.
5	LED status indicator.
	A multicolor system status LED on the front-face of the unit. Note that you can vary (dim) the strength of this LED from the cloud settings.
6	Serial Number, MAC, Claim code labels
7	Regulatory labels
8	Console port (covered with mylar label at manufacturing).

L

#### **Supported Access Points**

The Cisco Beacon Point Module can be attached to the following APs:

- AP3802I
- AP3802E

### **Cisco Beacon Point Module Features**

Cisco Beacon Point Module comes with the following features:

Table 3: Hardware Feature Summary

Feature	Description
LED indicators	A multicolor system status LED on the front-face of the unit. Note that you can vary (dim) the strength of this LED from the cloud settings.
Power Options	Draws power from the PCIe bus interface with the access point.

### **Technical Specifications**

Table 4: Technical Specifications of Cisco Beacon Point Module

Feature	Description
Dimensions (of APs with Cisco Beacon	285 mm x 275 mm x 61 mm
Point Module)	11.2 in. x 10.8 in. x 2.4 in.
Weight	1.4 kg (3.0 lbs)
Environmental	Fanless operation; passive cooling
	Nonoperating (storage) temperature: $-30$ to $70^{\circ}C$ ( $-22$ to $158^{\circ}F$ )
	Operating temperature: 0 to 40°C (32 to 104°F)
	Operating humidity: 10 to 90% (noncondensing)
	Operating altitude: 10,000 ft (3048 m)
Power Dissipation	Less than 6 W

### **Cisco Beacon Point Module Model Number**

Cisco Beacon Point Module is available in the following model:

Product ID	Description
AIR-RM-VBLE2-K9=	Cisco Beacon Point Module can be mounted on supported APs.
	Note that while the Cisco Beacon Point Module must be attached to supported APs, the Cisco Beacon Point itself is a standalone device.

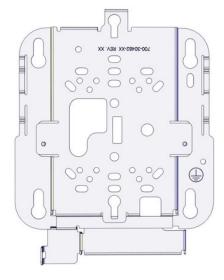
Table 5: Cisco Beacon Point Module Model Number

### **Installing a Cisco Beacon Point**

### **Unpacking the Cisco Beacon Point Module**

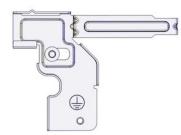
- **Step 1** Unpack and remove Cisco Beacon Point Module and accessories from the shipping box.
- **Step 2** Return the packing material to the shipping and save it for future use.
- **Step 3** Record the Serial Number, MAC address and Claim code of the Cisco Beacon Point Module. You will need this information later to claim the Cisco Beacon Point Module from Cisco Beacon Center.
- **Step 4** Verify that you have received the following items. If an item is missing or is damaged, contact your Cisco representative or reseller for further instructions.
  - Cisco Beacon Point Module
  - AIR-AP-BRACKET-2-There is no need to replace an existing bracket with the one in the packaging.

#### Figure 2: AIR-AP-BRACKET-2



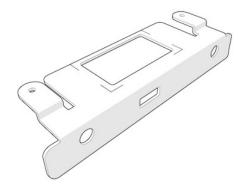
• Locking Lever—Designed to lock the AP to AIR-AP-BRACKET-2 when the Cisco BPM is being pushed into the AP.

Figure 3: Locking Lever



• Strength Bracket with two screws.

#### Figure 4: Strength Bracket



### **Attaching Locking lever to AIR-AP-BRACKET-2**

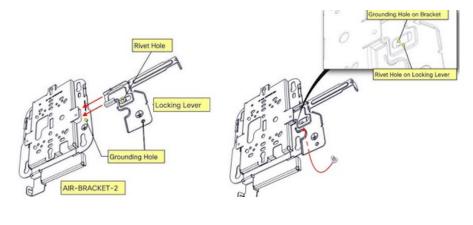
- If the AIR-AP-BRACKET-2 is already attached to the ceiling and has an AP installed, uninstall the AP and remove ethernet cables.
- If AIR-AP-BRACKET-1 has been used, it must be detached and replaced with AIR-AP-BRACKET-2.
- If this is a fresh installation of an AP, follow these instructions to attach the locking lever to the AIR-AP-BRACKET-2 before installing it on to the ceiling.

#### Before you begin

You will need:

- · Locking lever and supplied screw
- Philips screwdriver
- AIR-AP-BRACKET-2

Align and slide the Locking lever with the AIR-AP-BRACKET-2 until the grounding hole of the AIR-AP-BRACKET-2 aligns with the rivet hole of the Locking lever. Now using the screw supplied, attach the Locking lever to the AIR-AP-BRACKET-2.



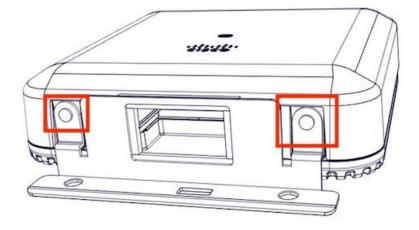
### Installing Cisco Beacon Point Module and APs Separately

#### Before you begin

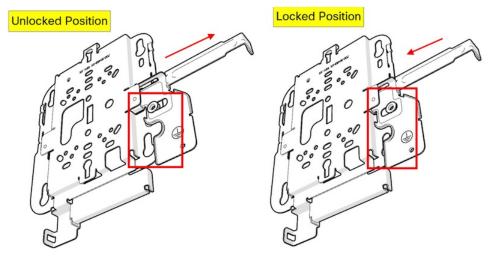
Ensure that the Locking lever is attached to the AIR-AP-BRACKET-2 as per the instructions in *Preparing AIR-BRACKET-2 for Cisco Beacon Point Module*. Remove the gasket piece when installing the Cisco AP 3802E.

**Step 1** Attach the Strength bracket to the AP with the two screws provided. Ensure that you use the appropriate screw driver size so as to not to strip the cross grooves. Apply enough pressure to the screws to drive them all the way into the AP until the bracket is firmly attached to the AP.

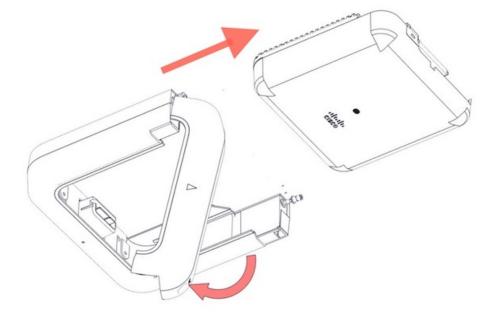
L



**Step 2** Leave the locking lever in the unlocked position.



- **Step 3** Now install the AP to the AIR-AP-BRACKET-2 as usual, ensuring that the AP snaps into the four holes of the bracket.
- **Step 4** Push the locking lever into the locked position to secure the unit. This secures and locks the AP in position during the installation of the Cisco Beacon Point Module in the next step.
- **Step 5** Now install the Cisco Beacon Point Module onto the AP. Loosen the captive screw on the Cisco Beacon Point Module handle and swing it open clockwise and all the way to the six-o-clock position. Slide the Cisco Beacon Point Module on to the AP until it snaps firmly on to the AP bracket, with the two dimples on Cisco Beacon Point Module snapping into the middle of the two bracket holes.



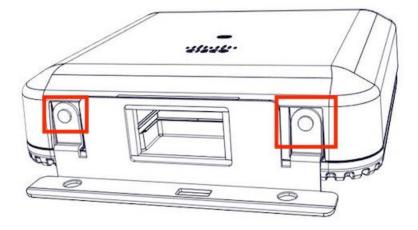
- **Step 6** Close the hinged door of the Cisco Beacon Point Module.
- **Step 7** Screw in the inset screw on the Cisco Beacon Point Module to secure the hinged door to the rest of the module.
- **Step 8** Claim the Cisco Beacon Point Module on the Cisco Beacon Center. You can observe the orientation of the Cisco Beacon Point Module on the Cisco Beacon Center. See the Cisco Beacon Center Configuration Guide.

### Installing the Cisco Beacon Point Module to the AP and Mounting as a Combined Unit

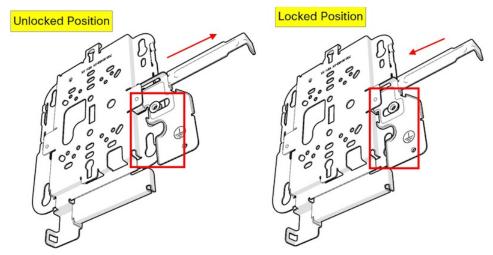
#### Before you begin

Ensure that the Locking lever is attached to the AIR-AP-BRACKET-2 as per the instructions in *Preparing AIR-BRACKET-2 for Cisco Beacon Point Module*. Remove the gasket piece when installing the Cisco AP 3802E.

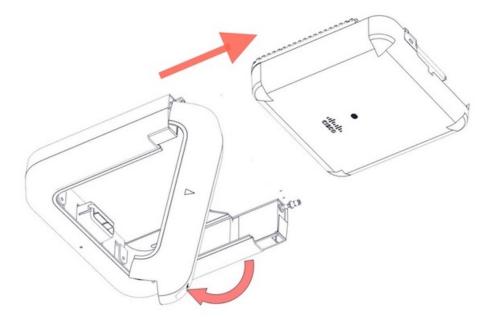
**Step 1** Attach the Strength bracket to the AP with the two screws provided. Ensure that you use the appropriate screw driver size so as to not strip the cross grooves. Apply enough pressure to the screws to drive them all the way into the AP until the bracket is firmly attached to the AP.



**Step 2** Leave the Locking lever in the unlocked position



- **Step 3** Now install the Cisco Beacon Point Module onto the unmounted AP. Loosen the captive screw on the Cisco Beacon Point Module handle and swing it open clockwise and all the way to the six-o-clock position. Slide the Cisco Beacon Point Module into the AP until it snaps firmly on to the AP bracket, with the two dimples on Cisco Beacon Point Module snapping into the middle of the two bracket holes.
- **Step 4** Close the hinged door of the Cisco Beacon Point Module.



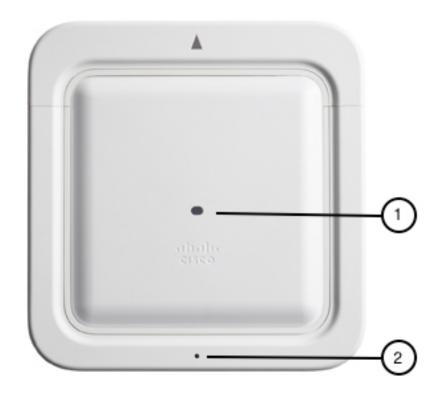
- **Step 5** Screw in the inset screw on the Cisco Beacon Point Module to secure the hinged door to the rest of the module.
- **Step 6** Install the AP (installed with the Cisco BPM) on to the AIR-AP-BRACKET-2 as you would normally do, that is, align the screws at the base of the AP with the key holes of AIR-AP-BRACKET-2 and slide the AP onto the slots until it snaps into place.
- **Step 7** Push in the locking lever into the locked position to secure the unit. This will ensure safety during future unmouting.
- Step 8Claim the Cisco Beacon Point Module on the Cisco Beacon Center. You can observe the orientation of the Cisco Beacon<br/>Point Module on the Cisco Beacon Center. See the Cisco Beacon Center Configuration Guide

### **Uninstalling Cisco Beacon Point Module**

- To uninstall the AP, unlock the locking lever, and then pull the AP out of the bracket.
- To remove the Cisco Beacon Point Module and keep the AP, ensure that the Locking lever remains in the locked position.

### **Cisco Beacon Point Module LEDs**

Figure 5: Face of Cisco Beacon Point Module



1	Access Point Status LED
2	Cisco Beacon Point Module Status LED



Small variations in color intensity and hue will be present from unit to unit. This is within the normal range of the LED manufacturer's specifications, and is not a defect.

Cisco Beacon Point status LED indicates various conditions, which are described in the table below:

LED Color	Cisco Beacon Point LED Status
Blinking red	Module beginning a boot reset.
Alternating green and yellow	Module booting.
White	Module connecting to Cisco Beacon Center.
Green	Module configured by Cisco Beacon Center.

LED Color	Cisco Beacon Point LED Status
Blinking orange	Module upgrading software.
Alternating green and purple	Module being located on Cisco Beacon Center.
Solid red	Module failure mode.



CHAPTER

# **Declarations of Conformity and Regulatory** Information

This chapter provides declarations of conformity and regulatory information for the Cisco Beacon Point. You can find additional information at this location.

- Manufacturers Federal Communication Commission Declaration of Conformity Statement, on page 13
- VCCI Statement for Japan, on page 14
- Guidelines for Operating Cisco Virtual Beacon in Japan, on page 15
- Canadian Compliance Statement, on page 15
- Statement 371—Power Cable and Power Injector, on page 16
- Industry Canada, on page 16
- This Device Meets FCC and International Guidelines for Exposure to Radio Waves, on page 17
- This Device Meets the Industry Canada Guidelines for Exposure to Radio Waves, on page 17
- · Cet appareil est conforme aux directives internationales en matière d'exposition aux fréquences radioélectriques, on page 18
- Additional Information on RF Exposure, on page 18
- Declaration of Conformity Statements, on page 19

# **ManufacturersFederalCommunicationCommissionDeclaration** of Conformity Statement

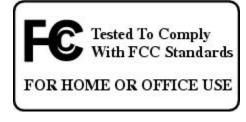


Table 7: Cisco Beacon Point Models and Certification Numbers

Cisco Beacon Point Models	Certification Number
Cisco Beacon Point Module	LDK825321596

#### Manufacturer:

Cisco Systems, Inc.

170 West Tasman Drive San Jose, CA 95134-1706 USA

This device complies with Part 15 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.

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 or more of the following measures:

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

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Cisco may void the user's authority to operate the equipment

Â

Caution

The Part 15 radio device operates on a non-interference basis with other devices operating at this frequency when using the integrated antennas. Any changes or modification to the product not expressly approved by Cisco could void the user's authority to operate this device.

### VCCI Statement for Japan



**Caution** This is a Class B product based on the standard of the Voluntary Control Council for Interference from Information Technology Equipment (VCCI). If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

この装置は、クラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を 引き起こすことがあります。 取扱説明書に従って正しい取り扱いをして下さい。

VCCI-B

### **Guidelines for Operating Cisco Virtual Beacon in Japan**

This section provides guidelines for avoiding interference when operating Cisco Virtual Beacon in Japan. These guidelines are provided in both Japanese and English.

### **Japanese Translation**

この機器の使用周波数帯では、電子レンジ等の産業・科学・医療用機器のほか
工場の製造ライン等で使用されている移動体識別用の構内無線局(免許を要する
無線局)及び特定小電力無線局(免許を要しない無線局)が運用されています。
1 この機器を使用する前に、近くで移動体識別用の構内無線局及び特定小電力
無線局が運用されていないことを確認して下さい。
2 万一、この機器から移動体識別用の構内無線局に対して電波干渉の事例が発
生した場合には、速やかに使用周波数を変更するか又は電波の発射を停止した
上、下記連絡先にご連絡頂き、混信回避のための処置等(例えば、パーティシ
ョンの設置など)についてご相談して下さい。
3 その他、この機器から移動体識別用の特定小電力無線局に対して電波干渉の
事例が発生した場合など何かお困りのことが起きたときは、次の連絡先へお問
い合わせ下さい。
03-6434-6500
連絡先:

### **English Translation**

This equipment operates in the same frequency bandwidth as industrial, scientific, and medical devices such as microwave ovens and mobile object identification (RF-ID) systems (licensed premises radio stations and unlicensed specified low-power radio stations) used in factory production lines.

- Before using this equipment, make sure that no premises radio stations or specified low-power radio stations of RF-ID are used in the vicinity.
- 2. If this equipment causes RF interference to a premises radio station of RF-ID, promptly change the frequency or stop using the device; contact the number below and ask for recommendations on avoiding radio interference, such as setting partitions.
- **3.** If this equipment causes RF interference to a specified low-power radio station of RF-ID, contact the number below.

Contact Number: 03-6434-6500

### **Canadian Compliance Statement**

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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. 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.

This radio transmitter has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

#### Table 8: Antenna Specifications for Module

Antenna Frequency	Antenna Peak Gain	Antenna Impedance	
2.4 GHz	5.8 dBi	50 ohms	

Le présent émetteur radio a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

### Statement 371—Power Cable and Power Injector

When installing the product, please use the provided or designated connection cables/power cables/AC adaptors. Using any other cables/adaptors could cause a malfunction or a fire. Electrical Appliance and Material Safety Law prohibits the use of UL-certified cables (that have the "UL" shown on the code) for any other electrical devices than products designated by CISCO.

The use of cables that are certified by Electrical Appliance and Material Safety Law (that have "PSE" shown on the code) is not limited to CISCO-designated products.

### **Industry Canada**

Table 9: Cisco Beacon Point Models and Certification Numbers

Cisco Beacon Models	Certification Number
AIR-RM-VBLE2-K9=	2461N-825321596

## This Device Meets FCC and International Guidelines for Exposure to Radio Waves

Cisco Beacon Point Module includes a radio transmitter and receiver. It is designed not to exceed the limits for exposure to radio waves (radio frequency electromagnetic fields) recommended by international guidelines. The guidelines were developed by an independent scientific organization (ICNIRP) and include a substantial safety margin designed to ensure the safety of all persons, regardless of age and health.

As such the systems are designed to be operated as to avoid contact with the antennas by the end user. It is recommended to set the system in a location where the antennas can remain at least a minimum distance as specified from the user in accordance to the regulatory guidelines which are designed to reduce the overall exposure of the user or operator.

#### **Table 10: Separation Distance**

МРЕ	Distance	Limit
0.0005 mW/cm <sup>2</sup>	30 cm (11.81 inches)	1.00 mW/cm <sup>2</sup>

The World Health Organization has stated that present scientific information does not indicate the need for any special precautions for the use of wireless devices. They recommend that if you are interested in further reducing your exposure then you can easily do so by reorienting antennas away from the user or placing he antennas at a greater separation distance then recommended.

# This Device Meets the Industry Canada Guidelines for Exposure to Radio Waves

The Cisco Beacon Point Module includes a radio transmitter and receiver. It is designed not to exceed the limits for exposure to radio waves (radio frequency electromagnetic fields) as referenced in Health Canada Safety Code 6. The guidelines include a substantial safety margin designed into the limit to ensure the safety of all persons, regardless of age and health.

As such the systems are designed to be operated as to avoid contact with the antennas by the end user. It is recommended to set the system in a location where the antennas can remain at least a minimum distance as specified from the user in accordance to the regulatory guidelines which are designed to reduce the overall exposure of the user or operator.

#### **Table 11: Separation Distance**

Frequency	МРЕ	Distance	Limit
2.4 GHz	0.005 W/m <sup>2</sup>	30 cm (11.81 inches)	5.4 W/m <sup>2</sup>

Health Canada states that present scientific information does not indicate the need for any special precautions for the use of wireless devices. They recommend that if you are interested in further reducing your exposure you can easily do so by reorienting antennas away from the user, placing the antennas at a greater separation distance than recommended, or lowering the transmitter power output.

# Cet appareil est conforme aux directives internationales en matière d'exposition aux fréquences radioélectriques

Cet appareil de la gamme Cisco Beacon Point Module comprend un émetteur-récepteur radio. Il a été conçu de manière à respecter les limites en matière d'exposition aux fréquences radioélectriques (champs électromagnétiques de fréquence radio), recommandées dans le code de sécurité 6 de Santé Canada. Ces directives intègrent une marge de sécurité importante destinée à assurer la sécurité de tous, indépendamment de l'âge et de la santé.

Par conséquent, les systèmes sont conçus pour être exploités en évitant que l'utilisateur n'entre en contact avec les antennes. Il est recommandé de poser le système là où les antennes sont à une distance minimale telle que précisée par l'utilisateur conformément aux directives réglementaires qui sont conçues pour réduire l'exposition générale de l'utilisateur ou de l'opérateur.

Table	12:	Distance	d'él	loignement
-------	-----	----------	------	------------

Fréquence	МРЕ	Distance	Limite
2.4 GHz	0.005 W/m <sup>2</sup>	30 cm (11.81 inches)	5.4 W/m <sup>2</sup>

Santé Canada affirme que la littérature scientifique actuelle n'indique pas qu'il faille prendre des précautions particulières lors de l'utilisation d'un appareil sans fil. Si vous voulez réduire votre exposition encore davantage, selon l'agence, vous pouvez facilement le faire en réorientant les antennes afin qu'elles soient dirigées à l'écart de l'utilisateur, en les plaçant à une distance d'éloignement supérieure à celle recommandée ou en réduisant la puissance de sortie de l'émetteur.

## **Additional Information on RF Exposure**

You can find additional information on the subject at the following links:

- · Cisco Systems Spread Spectrum Radios and RF Safety white paper at this location.
- FCC Bulletin 56: Questions and Answers about Biological Effects and Potential Hazards of Radio Frequency Electromagnetic Fields.
- FCC Bulletin 65: Evaluating Compliance with the FCC guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.
- You can obtain additional information from the following organizations.
- World Health Organization Internal Commission on Non-Ionizing Radiation Protection at this location.
- United Kingdom, National Radiological Protection Board at this location.
- Cellular Telecommunications Association at this location.
- The Mobile Manufacturers Forum at this location.

# **Declaration of Conformity Statements**

All the Declaration of Conformity statements related to this product can be found at this location