



# EU Directive 1999/5/EC - Compliance Information for the AIR-CAP1550 Series Lightweight IEEE802.11 a/b/g/n Outdoor Mesh Access Points

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This document contains compliance information for the Cisco AIR-CAP1550 Series Lightweight Outdoor Mesh Access Point that is relevant to the European Union and other countries that have implemented the EU Directive 1999/5/EC.

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# Scope

The information in this document is applicable to the Cisco 1550 Series Lightweight Outdoor Mesh Access Points that currently includes:

- AIR-CAP1552C-E-K9
- AIR-CAP1552E-E-K9
- AIR-CAP1552H-E-K9
- AIR-CAP1552I-E-K9

The 1550 Series dual-band mesh access points operate in the 2400- to 2483.5-MHz and the 5470- to 5725-MHz frequency range.

National regulations may require that operations be limited to portions of the frequency ranges identified above and/or at reduced power levels. See the [“National Restrictions” section on page 5](#) for complete details.

## Declaration of Conformity with Regard to the EU Directive 1999/5/EC (R&TTE Directive)

This declaration is only valid for configurations (combinations of software, firmware and hardware) supported or provided by Cisco Systems for use within the EU. The use of software or firmware not supported or provided by Cisco Systems may result in the equipment no longer being compliant with the regulatory requirements.

|                           |  |
|---------------------------|--|
| Български<br>[Bulgarian]  | Това оборудване отговаря на съществените изисквания и приложими клаузи на Директива 1999/5/EC.                             |
| Česky<br>[Czech]:         | Toto zařízení je v souladu se základními požadavky a ostatními odpovídajícími ustanoveními Směrnice 1999/5/EC.             |
| Dansk<br>[Danish]:        | Dette udstyr er i overensstemmelse med de væsentlige krav og andre relevante bestemmelser i Direktiv 1999/5/EF.            |
| Deutsch<br>[German]:      | Dieses Gerät entspricht den grundlegenden Anforderungen und den weiteren entsprechenden Vorgaben der Richtlinie 1999/5/EU. |
| Eesti<br>[Estonian]:      | See seade vastab direktiivi 1999/5/EÜ olulistele nõuetele ja teistele asjakohastele sätetele.                              |
| English:                  | This equipment is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.      |
| Español<br>[Spanish]:     | Este equipo cumple con los requisitos esenciales así como con otras disposiciones de la Directiva 1999/5/CE.               |
| Ελληνική<br>[Greek]:      | Αυτός ο εξοπλισμός είναι σε συμμόρφωση με τις ουσιώδεις απαιτήσεις και άλλες σχετικές διατάξεις της Οδηγίας 1999/5/EC.     |
| Français<br>[French]:     | Cet appareil est conforme aux exigences essentielles et aux autres dispositions pertinentes de la Directive 1999/5/EC.     |
| Íslenska<br>[Icelandic]:  | Þetta tæki er samkvæmt grunnkröfum og öðrum viðeigandi ákvæðum Tilskipunar 1999/5/EC.                                      |
| Italiano<br>[Italian]:    | Questo apparato é conforme ai requisiti essenziali ed agli altri principi sanciti dalla Direttiva 1999/5/CE.               |
| Latviešu<br>[Latvian]:    | Šī iekārta atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.                      |
| Lietuvių<br>[Lithuanian]: | Šis įrenginys tenkina 1999/5/EB Direktyvos esminius reikalavimus ir kitas šios direktyvos nuostatas.                       |

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|                            |  |
|----------------------------|--|
| Nederlands<br>[Dutch]:     | Dit apparaat voldoet aan de essentiële eisen en andere van toepassing zijnde bepalingen van de Richtlijn 1999/5/EC.                    |
| Malti<br>[Maltese]:        | Dan l-apparat huwa konformi mal-htigiet essenzjali u l-provedimenti l-oħra rilevanti tad-Direttiva 1999/5/EC.                          |
| Magyar<br>[Hungarian]:     | Ez a készülék teljesíti az alapvető követelményeket és más 1999/5/EK irányelvben meghatározott vonatkozó rendelkezéseket.              |
| Norsk<br>[Norwegian]:      | Dette utstyret er i samsvar med de grunnleggende krav og andre relevante bestemmelser i EU-direktiv 1999/5/EF.                         |
| Polski<br>[Polish]:        | Urządzenie jest zgodne z ogólnymi wymaganiami oraz szczególnymi warunkami określonymi Dyrektywą UE: 1999/5/EC.                         |
| Português<br>[Portuguese]: | Este equipamento está em conformidade com os requisitos essenciais e outras provisões relevantes da Directiva 1999/5/EC.               |
| Română<br>[Romanian]:      | Acest echipament este în conformitate cu cerințele esențiale și cu alte prevederi relevante ale Directivei 1999/5/EC.                  |
| Slovensko<br>[Slovenian]:  | Ta naprava je skladna z bistvenimi zahtevami in ostalimi relevantnimi pogoji Direktive 1999/5/EC.                                      |
| Slovensky<br>[Slovak]:     | Toto zariadenie je v zhode so základnými požiadavkami a inými príslušnými nariadeniami direktív: 1999/5/EC.                            |
| Suomi<br>[Finnish]:        | Tämä laite täyttää direktiivin 1999/5/EY olennaiset vaatimukset ja on siinä asetettujen muiden laitetta koskevien määräysten mukainen. |
| Svenska<br>[Swedish]:      | Denna utrustning är i överensstämmelse med de väsentliga kraven och andra relevanta bestämmelser i Direktiv 1999/5/EC.                 |
| Türk<br>[Turkish]:         | Bu cihaz 1999/5/EC Direktifi'nin temel gereklerine ve ilgili diğer hükümlerine uygundur.   |

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**Note**

The full declaration of conformity for this product can be found in the Declarations of Conformity and Regulatory Information section of the appropriate product hardware installation guide, which is available on Cisco.com.

The following standards were applied during the assessment of the product against the requirements of the Directive 1999/5/EC:

- Radio: EN 301.893 and EN 300 328
- EMC: EN 301 489-1 and EN 301 489-17
- Safety: EN 60950 and EN 50385



**Note**

The 5-GHz equipment employs a Dynamic Frequency Selection (DFS) mechanism which is required for operation in the 5 GHz frequency range.

## CE Marking

The following CE mark is affixed to the equipment and its packaging:



## National Restrictions

In the majority of the EU and other European Countries, the 2.4- and 5-GHz bands have been made available for the use of wireless LANs. [Table 1](#) provides an overview of the regulatory requirements in general applicable for the 2.4- and 5-GHz bands.

Later in this section you will find an overview of countries in which additional restrictions or requirements or both are applicable.

The requirements for any country may evolve. Cisco recommends that you check with the local authorities for the latest status of their national regulations for both the 2.4- and 5-GHz wireless LANs.

**Table 1** Overview of Regulatory Requirements for Wireless LANs

| Frequency Band (MHz)      | Max Power Level (EIRP) <sup>1</sup> (mW) | Indoor Only | Indoor and Outdoor |
|---------------------------|--|-------------|--------------------|
| 2400–2483.5               | 100                                      |             | X                  |
| 5150–5350 <sup>2, 3</sup> | 200                                      | X           |                    |
| 5470–5725 <sup>3</sup>    | 1000                                     |             | X                  |

1. Effective isotropic radiated power (EIRP).
2. Dynamic Frequency Selection and Transmit Power Control is required in the 5250- to 5350-MHz and 5470- to 5725-MHz frequency range.
3. As these are outdoor products, the band 5150 - 5350 MHz is not applicable.

The following sections identify countries having additional requirements or restrictions than those listed in Table 1.

## France

For 2.4 GHz, the output power is restricted to 10 mW EIRP when the product is used outdoors in the band 2454 - 2483,5 MHz. There are no restrictions when used in other parts of the 2,4 GHz band. Check <http://www.arcep.fr/> for more details.

Pour la bande 2,4 GHz, la puissance est limitée à 10 mW en p.i.r.e. pour les équipements utilisés en extérieur dans la bande 2454 - 2483,5 MHz. Il n'y a pas de restrictions pour des utilisations dans d'autres parties de la bande 2,4 GHz. Consultez <http://www.arcep.fr/> pour de plus amples détails.

## Italy

This product meets the National Radio Interface and the requirements specified in the National Frequency Allocation Table for Italy. Unless this wireless LAN product is operating within the boundaries of the owner's property, its use requires a “general authorization.” Please check <http://www.sviluppoeconomico.gov.it/> for more details.

Questo prodotto è conforme alla specifiche di Interfaccia Radio Nazionali e rispetta il Piano Nazionale di ripartizione delle frequenze in Italia. Se non viene installato all'interno del proprio fondo, l'utilizzo di prodotti Wireless LAN richiede una “Autorizzazione Generale”. Consultare <http://www.sviluppoeconomico.gov.it/> per maggiori dettagli.

## Latvia

The outdoor usage of the 2.4 GHz band requires an authorization from the Electronic Communications Office. Please check <http://www.esd.lv> for more details.

2,4 GHz frekvenču joslas izmantošanai ārpus telpām nepieciešama atļauja no Elektronisko sakaru direkcijas. Vairāk informācijas: <http://www.esd.lv>.



### Note

Although Norway, Switzerland and Liechtenstein are not EU member states, the EU Directive 1999/5/EC has also been implemented in those countries.



### Note

The regulatory limits for maximum output power are specified in EIRP. The EIRP level of a device can be calculated by adding the gain of the antenna used (specified in dBi) to the output power available at the connector (specified in dBm).

## Antennas

The AIR-CAP1552E-E-K9, AIR-CAP1552C-E-K9, and AIR-CAP1552H-E-K9 are equipped with N-type antenna connectors to allow the use of the AIR-ANT2547V-N omnidirectional antenna with 4-dBi gain in the 2.4-GHz band and 7-dBi gain in the 5-GHz band.

The AIR-CAP1552I-E-K9 is equipped with internal omnidirectional antennas with 2-dBi gain in the 2.4-GHz band and 4-dBi gain in the 5-GHz band.

Depending on the country a different regulatory limit might be applicable. It is therefore the responsibility of the end user to select a power level that, together with the antenna, results in an eirp (radiated power) level that is below the applicable limit.

See the [“National Restrictions” section on page 5](#) to identify the regulatory limit applicable in your country.

## Operating Frequency

The operating frequency in a Wireless LAN is determined by the access point. As such, it is important that the access point is correctly configured to meet the local regulations. See the [“National Restrictions” section on page 5](#) for the country specific operating frequency ranges.

## Changing Output Power

The output power on the AIR-CAP1550 Series access points can only be changed using a Cisco Wireless LAN Controller, or the controllers on a Wireless Services Module (WiSM).



### Note

See the *Cisco WLAN Controller Configuration Guide* for your wireless LAN controller for more details on how to configure your access point using the web-browser interface.



### Note

Administrator privileges on your controller might be required in order to change access point settings.

The access point must be registered with your controller before you can make any configuration changes.

Follow these steps to change the 1550 series access point's output power to meet local regulations using a controller:

- Step 1** Open your Internet browser. You must use Microsoft Internet Explorer 6.0.2800 or a later release.
- Step 2** Enter **https://IP address** (where *IP address* is the controller's IP address) in the browser address line and press **Enter**. A user login screen appears.
- Step 3** Enter the username and password and press **Enter**. The controller's summary page appears.



### Note

The username and password are case-sensitive.

- Step 4** Click **Wireless** and choose **802.11a/n** or **802.11b/g/n** under Access Points / Radios . A list of associated access points appears.

- Step 5** Choose the desired access point from the displayed list and click **Configure** from the drop down arrow. The radio configuration page appears.
- Step 6** Scroll to the Tx Power Level Assignment field, and click **Custom**.  
**Custom** indicates that the radio output power is manually controlled by the Tx Power Configuration setting field.
- Step 7** In the Tx Power Level field, select the appropriate power level setting (1 to 5).  
**Table 2** lists the corresponding conducted power levels for each of the controller power level settings.

**Table 2** Conducted Power Level Settings for 2.4- and 5-GHz Radios

| Controller Power Level Setting (#) | Corresponding Power Level (dBm) |       |
|------------------------------------|---------------------------------|-------|
|                                    | 2.4 GHz                         | 5 GHz |
| 1                                  | 15                              | 23    |
| 2                                  | 12                              | 20    |
| 3                                  | 9                               | 17    |
| 4                                  | 6                               | 14    |
| 5                                  | 3                               | 11    |

- Step 8** Click **Apply**.
- Step 9** Close your Internet browser.

## Related Documentation

These documents provide information about the controllers and access points:

- *Cisco Wireless LAN Controller Installation and Configuration Guide*—describes installation, configuration, and logging into Cisco Wireless LAN Controllers.
- *Cisco Aironet 1550 Series Outdoor Mesh Access Point Hardware Installation Guide*—describes the access point's hardware installation and specifications.
- *Quick Start Guide: Cisco Aironet 1550 Series Outdoor Mesh Access Point*—provides a product overview and basic instructions for getting a 1550 series access point connected to a wireless LAN.
- *Channels and Maximum Power Settings for Cisco 1550 Series Outdoor Mesh Access Points*—lists the 1550 series mesh access point IEEE 802.11b/g (2.4-GHz) and IEEE 802.11a (5-GHz) channels and the maximum power levels supported by the world's regulatory domains.



**Note**

If you still have questions regarding the compliance of these products or you can not find the information you are looking for, please send an email request to Cisco at [complianceinfo@cisco.com](mailto:complianceinfo@cisco.com).



# Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see [What's New in Cisco Product Documentation](#).

To receive new and revised Cisco technical content directly to your desktop, you can subscribe to the [What's New in Cisco Product Documentation RSS feed](#). The RSS feeds are a free service.

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This document is to be used in conjunction with the documents listed in the “[Related Documentation](#)” section.

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